POLYCOM®

MGC Manager User's Guide Volume I

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1

Before You Begin

The MGC Manager application is designed to set up and monitor multipoint video conferences, and to perform system configuration activities for the MGC Multipoint Control Units (MCUs) to which it connects. MGC Manager is consists of a user-provided PC workstation, equipped with a Windows 98®, Windows NT®, Windows 2000® or Windows XP® operating system, and of the MGC Manager software. The PC can connect to the MGC unit via LAN, Internet, dial-up modem or RS-232 interface.

System Requirements

The MGC Manager application can be installed in an environment that meets the following requirements:

- IBM PC compatible computer Pentium II, 400 MHz CPU or higher
- Minimum 64 MB RAM (recommended 64 MB)
- Windows 98®, Windows ME®, Windows NT®, Windows 2000® or Windows XP® operating system
- Modem (optional)
- Network capabilities - TCP/IP

Prerequisites

This manual assumes the user has the following knowledge:

- Familiarity with Windows 98®, Windows NT®, Windows 2000®, or Windows XP operating systems and interface
- Basic knowledge of video conferencing concepts and terminology

About the MGC Manager User's Guides

The MGC Manager User Guides documentation set includes the following volumes:

- MGC Manager User's Guide - Volume I
- MGC Manager User's Guide - Volume II
- MGC Manager User's Guide - VoicePlus Edition

The content of these volumes is listed below.

The VoicePlus Edition includes information required to use the MGC VoicePlus bridge and Audio Only conferencing features.

In addition to the User's Guides, the MGC kit includes:
MGC Administrator's Guide, MGC-50/100 Getting Started Guide, MGC-25 Getting Started Guide, MGC+ Getting Started Guide, MGC-50/100 Hardware and Installation Manual and MGC+ Hardware and Installation Manual.

Listed below are chapters and topics included in the volumes of the current user guides.

MGC Manager User's Guide - Volume I

Chapter 1 - Before You Begin
Provides a general description of MGC unit system requirements and prerequisites. Lists and briefly describes the chapters that comprise the MGC Manager User's Guides.

Chapter 2 - MGC Manager Overview
Provides a general description of the MGC unit and its main features.

Chapter 3 - MGC Manager Basics
Contains introductory information about the MGC Manager application and describes the application's main window, menus, and toolbars. Includes step-by-step instructions for connecting to an MCU.

Chapter 4 - Setting up Conferences
Includes a general description of video conference types, functions and parameters. Describes participant roles and parameters. Provides step-by-step instructions for setting up and starting an On Going Conference, as well as instructions for defining new participants.

Chapter 5 - Monitoring Conferences
Describes options available during On Going Conferences for general monitoring, conference level monitoring and participant monitoring.

Chapter 6 - Operations Performed During On Going Conferences
A description of operations that can be performed during an On Going Conference.

Chapter 7 - Meet Me per Conferences and Meeting Rooms
Describes the methods for reservation-less conferencing and how to define *Meet Me* conferences. Describes how to monitor On Going *Meet Me* conferences and how to set up and monitor Meeting Room conferences.

Chapter 8 - Entry Queues, Operator Conferences and Attended Conferencing
Describes Entry Queues and Operator conferences. Includes step-by-step instructions for setting up Entry Queues and Operator conferences. Lists all the Attended Conferencing options.

Chapter 9 - Conference Reservations
Describes how to define and schedule conference Reservations and recurring conferences.

Chapter 10 - Lecture Mode and Presentation Options
Describes and includes step-by-step instructions for setting up and monitoring Lecture Mode, Presentation Mode and Lecture Show conferences.

Chapter 11 - Click&View
Describes how to activate and use the Click&View application.

Appendix A - Disconnection Causes
Lists the various disconnection causes according to the Q.931 standard.

Appendix B - Glossary
Lists and describes terms frequently used in the MGC Manager User's Guides and terms related to video conferencing.

MGC Manager User's Guide - Volume II

Chapter 1 - Advanced Conference Settings
Describes advanced video conferencing features. Includes step-by-step instructions for setting up large Video Switching conferences, auto detection of participant line rate, LSD – Far End Camera Control (FECC), simple and Star Cascading conferences, Dual Stream modes, encryption, automatic extension of conference duration and more.

Chapter 2 - IVR and Entry Queue Services
Describes how to define IVR Message Services and Entry Queue Services, how to download voice messages to the Audio+ card and how to check the status of messages in the MCU memory.

Chapter 3 - Ad Hoc Conferencing and External Database Authentication
Describes Ad Hoc conferencing and external database authentication, including different scenarios and authentication procedures. Includes instructions on how to define Profiles and set up Entry Queues for Ad Hoc conferencing.

Chapter 4 - AV Message Services and Greet and Guide Conferences
Describes the Greet and Guide mode and options. Includes step-by-step instructions for setting up AV Message Services and Greet and Guide conferences, and their monitoring and management.

Chapter 5 - H.243 Conferences
Includes step-by-step instructions for setting up and monitoring Cascading conferences according to H.243. In addition, this chapter describes how to set up and monitor the H.243 Chair Control (a part of the H.243 standard).

Chapter 6 - Using a Database
Describes the database file which must be registered in the ODBC of the operator's workstation during the installation procedure. Includes a description of the registration procedure for both Access and SQL databases; how to log into the Database Manager application; how to define and modify databases and participant and general system defaults; how to set up permissions and users.

Chapter 7 - Database Templates
Describes how to use the database tables and how to define conference and participant templates.

Chapter 8 - Templates Handling
Describes the operations that can be performed using conference and participant templates.

Chapter 9 - Recording
Describes how to record using the Readi*Recorder, the* RSS2000 and the Prairie Systems recording systems.

Chapter 10 - Call Detail Records (CDR) Utility
Contains the information required to view conference details. Describes how to retrieve and archive the conference records.

Appendix A - CDR - Unformatted File Fields
Contains details of the events, fields and values that can be found in CDR unformatted files.

MGC Manager User's Guide - VoicePlus Edition

Chapter 1 - Overview
Provides a general description of the MGC unit's main audio features, system requirements and prerequisites.

Chapter 2 - Defining Standard Audio Only Conferences and Reservations
Includes step-by-step instructions for setting up On Going Audio Only Conferences and Reservations, and for defining Audio Only participants.

Chapter 3 - Monitoring Audio Only Conferences
Describes the information provided by the MGC Manager when monitoring an On Going Audio Only conference.

Chapter 4 - Operations Performed During On Going Conferences
Describes the operations that can be performed during an On Going Audio Only conference.

Chapter 5 - Meeting Rooms and Entry Queues
Includes step-by-step instructions for setting up Audio Only Meeting Rooms and Entry Queues.

Chapter 6 - IVR and Entry Queue Services
Provides a general description of IVR and Entry Queue Service usage. Includes step-by-step instructions for defining new IVR and Entry Queue Services, downloading the voice message files to the Audio+ card and printing the DTMF codes defined in the IVR Message Service.

Chapter 7 - Attended Conferencing
Describes Operator conferences and Attended Participant Management.

Conventions

When learning the MGC Manager application, it is important for you to correctly interpret the terms and conventions used in this Guide:

- “Choose” or “Double-click” is used when you need to activate a menu command or a command button in the dialog box.
- “Select” or “Click” is used to highlight a part of the window, dialog box or menu that you want to be changed with your next action.
- “Right-click” is used when you press and release the right mouse button to open a pop-up menu.
- “Choose OK” means that you can either click the OK button with the mouse, or press the <Enter> key on the keyboard.
- Keyboard keys appear in capital letters, between these two symbols < >. For example, the Shift key appears as <Shift>.
- The plus sign (+) between two key names indicates that you must press and hold down one key while pressing down the second key. For example, “press <Alt>+<P>” means that you press and hold down the Alt key while you press the P key.
- **Bold** type appearing in the text or in a procedure indicates the word or the character that you should type into a text box. Bold type is also used to indicate the name of a menu item or command that you should select.
- *Italic* type appearing in the text or in a procedure indicates the name of an icon, a menu, a dialog box or a field from which an option should be selected or into which parameters should be entered.
- Tips and notes are indicated by an icon and appear in a special format on a gray background. For example:

This is an example of the type of note that you encounter in this User Guide.

2

MGC Manager Overview

In multipoint video conferencing, several audio and video endpoints can simultaneously participate in a conference by connecting to the Multipoint Control Unit (MCU). The MGC unit can connect the endpoints via ISDN, T1-CAS, IP (SIP and H.323), ATM and serial connections (MPI), allowing participants from any deployed network to participate in one conference.

Figure 2-1 shows a basic multipoint conferencing scheme and connection types.

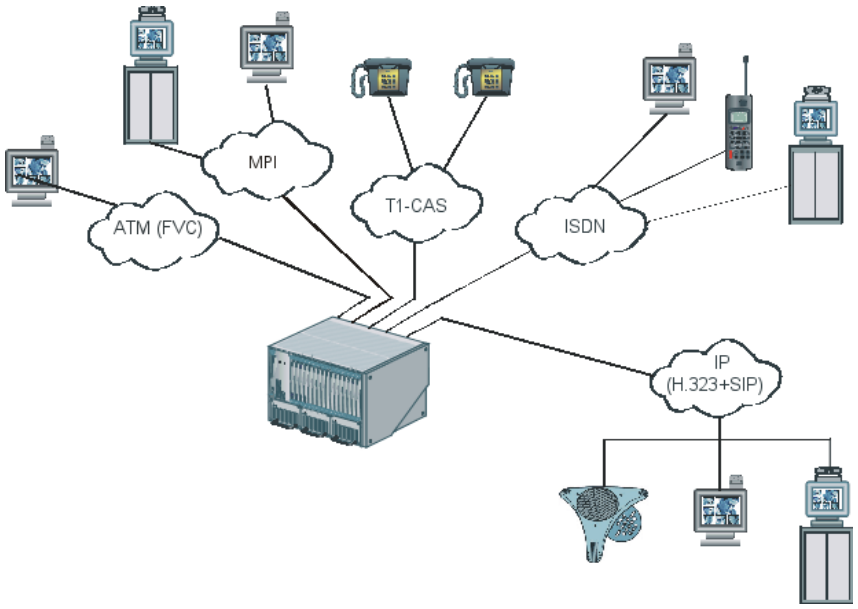


Figure 2-1: Multipoint Video Conferencing using an MGC unit

MCU Management

The MGC unit is controlled by the MGC Manager application. The MGC Manager connect to the MGC unit using:

- Ethernet LAN (other than the LAN used for conferencing)
- TCP/IP Internet
- RS-232
- Dial-up modem

Up to 30 local or remote MGC Manager workstations can connect to a single MGC unit simultaneously. A single MGC Manager operator can control multiple MGC units and conferences. The MGC unit can also be controlled through a Web browser via the MGC *WebCommander* application. Using the MGC Personal Scheduler add-on, conferences can be scheduled from the MCU in Microsoft's Outlook.

Figure 2-2 illustrates the MGC Manager system components.

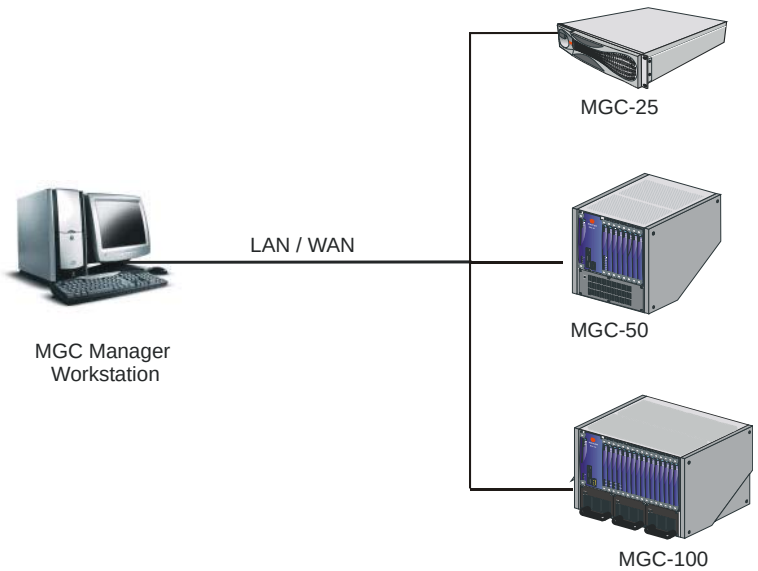


Figure 2-2: MGC Manager - MCU Connection

MGC System Main Features

The MGC main features are:

- Universal Transcoding
- Dynamic Continuous Presence
- Multiple Switching Modes
- IVR-Enabled Conferencing
- Encryption
- Single-dial Entry Queues

Universal Transcoding

For each endpoint connected to a conference, the MGC's Universal Transcoding gateway automatically identifies the: audio compression, video protocol, video resolution, frame rate and bandwidth. The MCU then performs any necessary translations "on the fly", ensuring that each endpoint operates at their optimal capability.

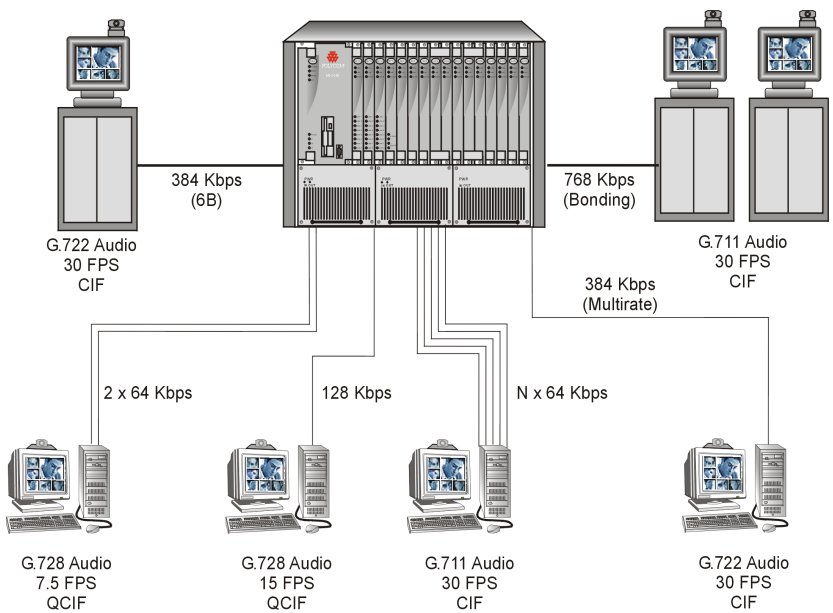


Figure 2-3: Transcoding Performed by the MGC Unit

Dynamic Continuous Presence (CP)

The dynamic Continuous Presence capability of the MGC system offers multiple viewing options and window layouts for video conferencing.

Continuous Presence (CP) for video conferencing is available in three modes:

- Classic
- Quad Views
- Software

The Continuous Presence *Classic* mode offers 21 layouts to accommodate different numbers of participants and conference settings.

Figure 2-4: Continuous Presence Classic Mode - Video Layouts

The Continuous Presence *Quad Views* mode offers three additional layouts for larger conferences with more than 10 participants (4x4, 2+8, 1+12).

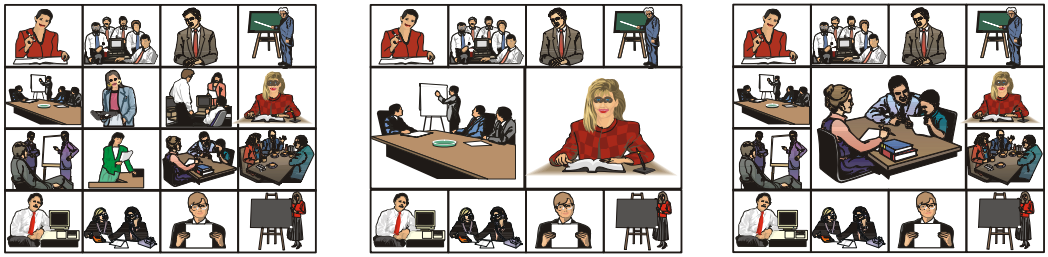


Figure 2-5: Continuous Presence Quad Views - Additional Video Layouts

For conferences with more participants than display squares, the MGC's dynamic video mix capability allows the site mix (which sites can be seen) to be modified throughout the conference. The displayed layout can be preset in the reservation stage or changed during an On Going conference, allowing a participant to view different screen layouts of the other conference participants. These layout options allow conferences to have greater flexibility when displaying a large number of participants and maximizes the screen's effectiveness.

When *Auto Layout* is set for the CP conference, the MGC system automatically selects the video layout based on the number of currently connected participants in the conference, and it changes dynamically during the conference when video participants are connected or disconnected.

The *Continuous Presence - Software* (Software CP) is a software solution for IP only conferences that resembles Continuous Presence but saves video card resources. In Software CP, only two types of video layouts are available: 2x1 and 2x2.

Multiple Switching Modes

Switching between video participants can be performed using these features:

- Voice activation
- Operator-force via the MGC Manager to and/or the MGC WebCommander
- Selecting certain participant display windows as fixed and others as voice-activated
- Lecture Mode - The lecturer is viewed in full screen by all conference participants, while the audience is “scanned” for the speaker’s view.
- Presentation Mode - When the speaker’s presentation extends beyond a predefined time, that speaker becomes the lecturer and the conference switches to Lecture Mode.

IVR-Enabled Conferencing

The Interactive Voice Response (IVR) is a software module that automates the connection process to the conference and lets participants and chairpersons perform various operations during the On Going Conference. By combining the input of the caller with the menu-driven scripts (DTMF codes), participants can call the conference dial-in number and use a touch-tone telephone or the endpoint’s remote control to interact with the conferencing system.

Using IVR and DTMF codes, participants and chairpersons can perform various management operations during a conference, for example:

- Request personal assistance
- Request assistance for conference (Chairperson)
- Lock or unlock conferences to dial- in participants (Chairperson)
- Adjust the participant’s broadcasting and listening audio volume (All)
- Mute or unmute the participant’s audio channel (All)
- Mute all participants except the requesting participant (Chairperson)
- Cancel the Exclusive Speaker mode (Chairperson)
- Mute “Meet Me” dial-in participants upon their connection to the conference (Chairperson)

- Change the conference password (Chairperson)
- Place the conference on-hold (Chairperson)
- Reinstate an on-hold conference (Chairperson)
- Manage a Question-and-Answer session (Chairperson)
- Conduct a Voting session (Chairperson)
- Play the Help menu
- Enable or disable the Roll Call feature (Chairperson)
- Request a Roll Call and stop the Roll Call names review (Chairperson)
- End (manually terminate) the Conference (Chairperson)

The IVR software module requires the installation of the Audio+ card in the MCU. For a detailed description of the IVR module, refer to the *MGC Manager User's Guide Volume II, Chapter 2*.

Attended Conferencing

By using the MGC Manager, system operators can manage the participant connection to the conference and perform the following operations:

- Personally guide individual participants to the conference
- Monitor all participants who are currently waiting in the Entry Queue and IVR Queue regardless of their conference association
- Assist participants in the Entry Queue, IVR queue, or during the conference
- Conduct Voting sessions
- Control Question and Answer sessions

Encryption

Encryption is available at the MCU conference and participant level, based on AES 128 Media Encryption and DH 1024 Key Exchange standards. Encryption is supported in all types of audio and video conferences with ISDN and IP participants.

Single Dial Entry Queue

An Entry Queue is a special routing lobby to which one or several dial-in numbers are assigned. When callers dial this number, they access this Entry Queue where they wait to be routed and connected to the conference.

Additional Video Features

The following features and enhancements are also available with the MGC (Video+ card is required):

- H.264 video protocol for high quality transmission in addition to H.263 and H.261
- Conference On Port (COP) mode - Continuous Presence video layouts may be viewed by all participants while using only one video port, increasing the number of participants in a video conference
- Click&View application - an endpoint application that lets participants select their personal video layout from their endpoints via DTMF codes
- Choice of a personal video layout for participant
- Visual effects for video display (background color, window border color and speaker indication color)
- Enhanced video quality through the use of 4CIF video resolution
- H.230/People+Content - the ability for a video conference participant to introduce content from a laptop, PC or Macintosh into the call so that all participants can see the Content and the speaker at the same time.
- Video Invite - enables participants (usually the Chairperson), from any endpoint (H.323, H.320, SIP, MPI), in a video conference to invite H.323 participants into the conference.
- Visual Indication - Visual (Text and/or Icon) indications can be displayed on the endpoint’s screen when a participant joins or leaves the conference or when the conference is about to end.

Conferencing Capabilities and Options

Conference Reservations Features

MGC Manager provides the following options:

- Conferences can be reserved and scheduled ahead of time (Reservations) or set up to start immediately (On Going Conferences)
- Conference resources are defined and reserved during conference setup
- Recurrent conferences can be scheduled in advance (a reservation can include recurrent conferences)
- The central reservations database is easily accessed
- MGC Manager displays all the defined reservations for multiple MCUs
- Reservation-less features: Ad Hoc conferencing and Meeting Rooms

Conference Setup Features

The following options are available when setting up conferences:

- Dial-in for undefined participants
- Dial-in with automatic line rate detection for defined participants
- Meet Me per Conference
- Meeting Rooms
- Dial-out (manual or automatic)
- Automatic line rate detection for undefined dial-out participants
- On-demand conferencing
- Entry Queue access (using one dial-in number for all conferences)
- Interactive Voice Response (IVR) software module for moderated conference access
- Greet and Guide with manual or automatic guidance to conferences

Conference Management and Monitoring Features

MGC Manager provides capabilities for management and monitoring of participants and conferences, including the following:

- Lecture Mode, Lecture Show or Presentation Mode in Continuous Presence conferences
- Far End Camera Control (FECC/LSD) in video conferences
- H.243 Cascading conferences
- H.243 Chair Control for video conferences
- Streaming of video and data according to endpoint type (Dual Stream)
- Management and monitoring of Voting and Q&A sessions
- Automatic termination of idle (no participants) conferences
- Automatic extension of conference duration
- Control of listening and broadcasting audio volume for individual participants
- Automatic detection and muting of noisy line participants (SilenceIT)
- Auto Gain Control (AGC) noise and audio volume regulation for individual participants
- Advanced control and greetings for attended conferences
- Conference control via DTMF codes from user's endpoint or telephone
- Entry, exit and end-of-conference alert indications
- Media encryption
- Modification of certain conference properties
- Option to add and invite new participants during conference
- Display of all defined reservations for multiple MCUs
- Easily accessed Call Detail Records (CDR)
- Cut, copy & paste and/or multiple drag & drop of participants
- Active display of all system resources
- Active display of all conferences and participants from multiple MCUs
- Real-time monitoring of each participant's connection status and properties

MGC Hardware Enhancements

The MGC unit provides the following features and enhancements:

Connectivity

The MGC unit enables multi-network conferences by connecting to the following networks:

- ISDN T1/E1
- Leased E1/T1
- T1-CAS
- ATM (FVC) 25 & 155 Mbit/s
- IP Networks H.323 and SIP
- MPI V.35/RS-449/EIA-530

Scalable Architecture

You can increase capacities of the MGC unit by adding ports as needed, with no performance degradation. All MGC ports are centrally controlled, as a result, system management is simplified and resources can be used efficiently and at a lower cost.

Reliability

The powerful telecom architecture allows the MGC unit to ensure continuous multipoint service for all calls, even in the most rigorous conferencing environments. The MGC architecture includes:

- Automatic resource allocation
- Redundant power supplies (in the MGC-100 & MGC+100 only). The MGC-100 can be equipped with up to three load-sharing, redundant power supplies.
- Front-accessible hardware cards for ease of maintenance (MGC-100/ MGC-50 & MGC+100/MGC+50)

Maintenance

The MGC unit offers the following advanced maintenance features that minimize downtime and the need for human intervention:

- On-line diagnostics that continuously monitor system and network failures
- Universal slot architecture that allows all cards to fit into any slot (MGC-100/MGC-50 & MGC+100/MGC+50)
- Front-accessible cards
- Hot-swappable cards (MGC-100/MGC-50 & MGC+100/MGC+50)
- Self-configuring cards
- LED status lights on the front panel of all cards (MGC-100/MGC-50 & MGC+100/MGC+50), or status indications on the LCD window (MGC-25)
- Notifications to the MGC Manager to ensure fast problem isolation and resolution
- Software updates via the Internet or intranet

3

MGC Manager Basics

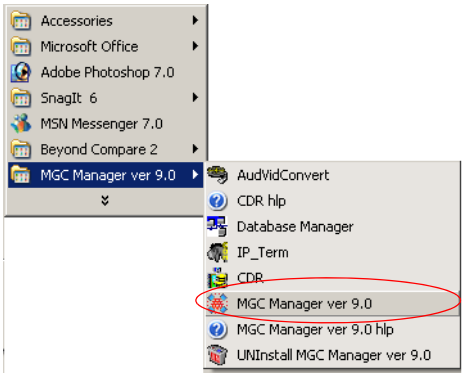
The MGC Manager is a Windows-based, operator controlled interface, installed on a user-provided PC.

Starting the MGC Manager Application

At the end of the MGC Manager software installation, the MGC Manager application folder is added to the *Programs* menu, under the *Start* menu.

To start the MGC Manager Application:

- In the **Start -> Programs** menu, click the **MGC Manager ver 9.0** folder**,** and then click the **MGC Manager ver 9.0** icon.



The *MGC Manager* main window opens.

The MGC Manager Main Window

When you open the MGC Manager application, the main window is displayed.

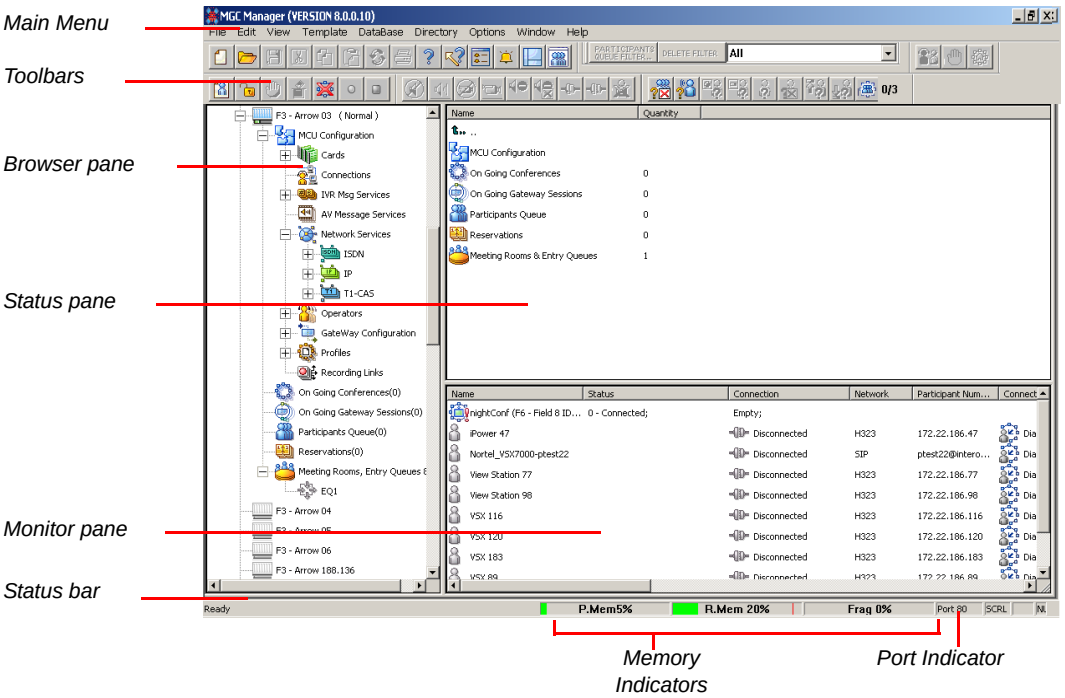


Figure 3-1: MGC Manager Main Window

You can display the main window and any other window (such as template lists and databases) in various ways. The MGC Manager maintains the last display each time it is opened.

The MGC Manager main window is divided into the following sections:

Table 3-1: MGC Manager Main Window Details

Window Item	Description
Main Menu bar	Displays titles of available menus.
Toolbars	The MGC Manager has several toolbars for quick access to commonly used tasks. The toolbars are displayed in the default positions, but can be moved (drag and drop) anywhere in the window. The MGC Manager maintains their last positions when the application is closed and restarted.
Browser pane	Displays the MCUs defined in the MGC Manager. Each MCU tree can be expanded, to display options for setting up and managing conferences and configuring the MCU.
Status pane	Displays status information for the MCU's cards, On Going Conferences, Reservations, Meeting Rooms and conference participants.
Monitor pane	Displays details of several conferences and participants simultaneously and provides management options for the monitored items.
Status bar	Displays the memory utilization indicators and the communication port between the MCU and the MGC Manager. The *P. Mem* column displays the usage of RAM, measured by Partition. The *R. Mem* column displays the usage of RAM, measured by Region. The Frag column displays the largest free consecutive buffer in the region where MCMS is loaded. The *Port* column identifies the port used for communication between the MCU and the MGC Manager/ WebCommander to which the MGC Manager is connected. Port 80 is the default port and Port 443 is used for secured communication (SSL or TLS). **Note:** These indicators are enabled if the *Display MCU Memory* option (*File -> Preferences*) is selected. For details, see "Showing and Hiding the Memory Indicators" on page 3-10.

Additional Windows

The MGC Manager uses several windows to present information. If multiple windows are open at a time and a window is hidden behind another one, it can be accessed by clicking on the *Window* menu. For details, see “Multiple Window Display” on page 3-12. Several windows display Templates, such as: Reservation Templates and Participant Templates. Templates contain conference and participant settings for repeated use when similar properties are needed.

The various template windows can be placed alongside or on top of the main window, allowing you to work simultaneously with the template windows and the main window. There are two categories of templates: database templates and Polycom proprietary templates. Each category is displayed in a separate window.

Database Template Windows

Microsoft Access or SQL databases can be used to organize conference and participant templates. Conference templates and participant templates are displayed in two separate windows.

- **Reservations in Database Window**

  The *Reservations in Database* window displays the list of currently available Reservation Templates stored in the database. This window is used to initiate On Going Conferences or conferences that automatically start at a predetermined time. This window automatically opens the first time the MGC Manager application is started and remains open until it is closed.

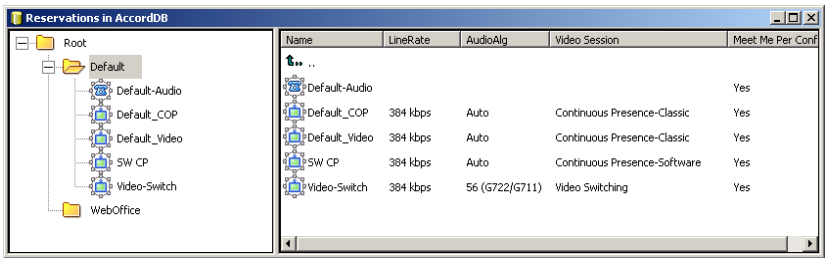


Figure 3-2: Reservations in Database Window

- **Participants in Database Window**

  The *Participants in Database* window displays the list of currently available Participant Templates stored in the database. This window is used to add participant definitions to a Reservation or to an On Going Conference. You open this window from the *Database* menu.

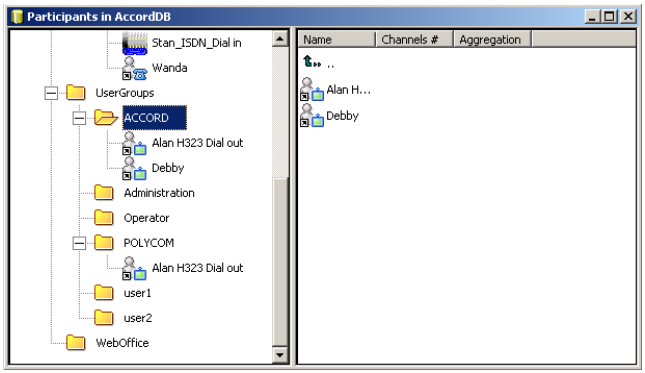


Figure 3-3: Participants in Database Window

Polycom Proprietary Template Windows

Polycom template files store participant and conference Templates in proprietary format. The templates files are organized into two file types: Reservation templates files and Participant templates files.

- **Reservation Templates File**

  The *Reservation templates file* is a repository of templates that are used to initiate an On Going Conference or a Reservation. The *Reservation Templates (ResTemplates) File* window opens from the *Templates* menu.

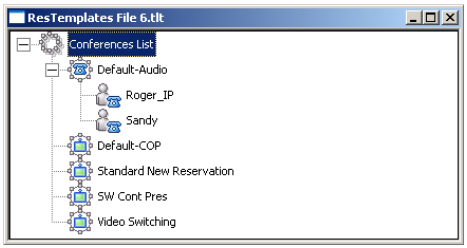


Figure 3-4: Reservation Templates File Window

- **Participant Templates File**

  The *Participant templates file* contains all the information required to define a participant in a conference, and is used to add participants to conferences without having to define their parameters individually. The *Participant template (Party Templates) file* opens from the *Templates* menu.

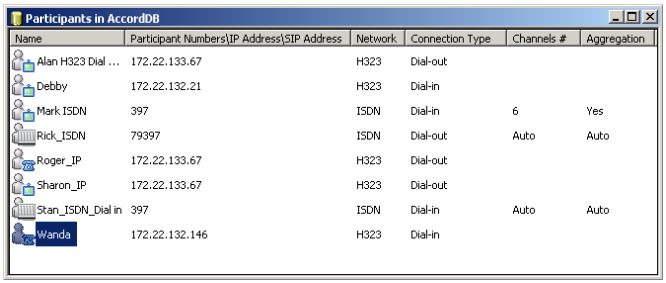


Figure 3-5: Participant Templates File Window

Participants Queue Window

The *Participants Queue* window contains a list of the participants who are waiting for operator assistance. This window automatically opens the first time you start the MGC Manager, and remains open until you close it. You can open this window manually by clicking the *Participants Queue* button on the Main toolbar.

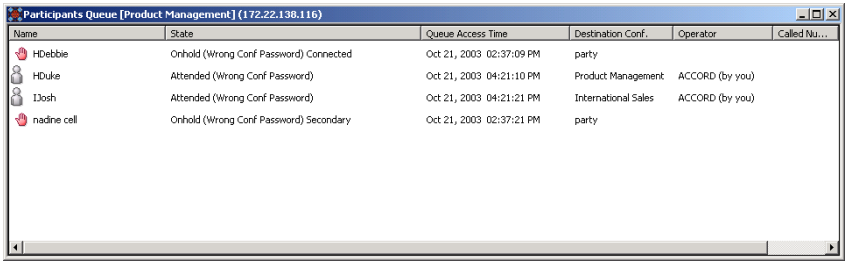


Figure 3-6: Participants Queue Window

This window is used mainly in attended conferencing.

MGC Main Window View Modes

You can select the *View* mode of the MGC Manager *Main* window and whether or not to show or hide various components of the *Main* window.

Selecting the View Mode

You can change the view of the MGC Manager *Main* window by toggling between the horizontal and the vertical view. When switching between the views, you are required to restart the MGC Manager application. The default window layout setting is the *Vertical* View.

In *Horizontal View*, the *Browser* pane is displayed along the left side of the window, and the *Monitor* pane is displayed underneath it along the bottom of the window.

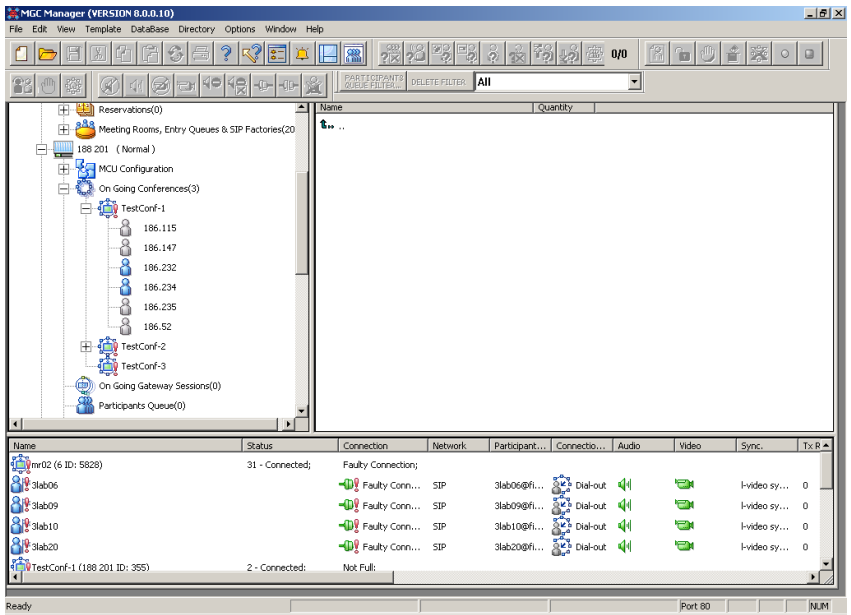


Figure 3-7: MGC Manager Main Window - Horizontal View

In *Vertical View*, the *Browser* pane is displayed in full-length along the left side of the window and the *Monitor* pane is displayed beside it, below the *Status* pane.

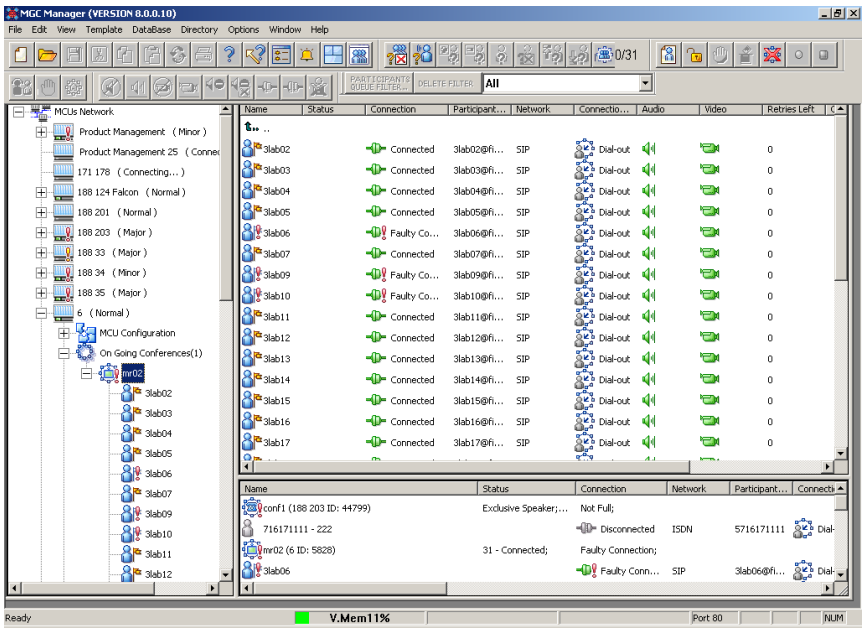
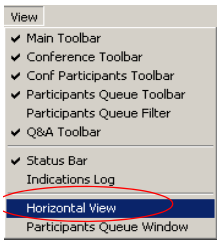


Figure 3-8: MGC Manager Main Window - Vertical View

You can resize the Main window panes to display the information as you choose. When the application is restarted, the panes retain the selected layout until you change it again.
For more details, see “Resizing the Window Panes” on page 3-11.

To modify the main window view mode:

1. On the *View* menu, click **Vertical View** (if *Horizontal View* is displayed) or **Horizontal View** (if *Vertical View* is displayed).



Alternatively, on the toolbar, click the **Change View Mode** icon .
A warning message is displayed, indicating that the MGC Manager application must be restarted.

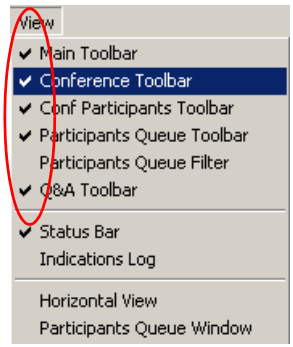
2. Click **OK** to restart the MGC Manager application.
When you restart the MGC Manager application, you may be required to log on depending on your application settings if a logon record is created. See "Connecting to an MCU" on page 3-21.

Showing and Hiding the Toolbars

By default, all toolbars are displayed below the main menu. You can show or hide them as needed.

To show or hide a toolbar:

- On the *View* menu, click the name of the toolbar to show or hide.
A check mark is placed next to the toolbar name on the menu to indicate its display, and is removed when the toolbar is hidden.

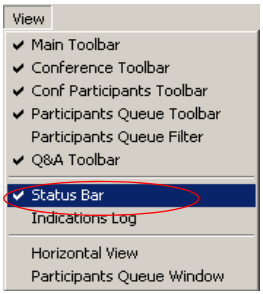


Showing and Hiding the Status Bar

The Status bar is displayed along the bottom of the Main window by default.

To show or hide the Status bar:

- On the *View* menu, click **Status Bar**. If the Status Bar is not currently displayed, a check mark is placed next to *Status Bar* on the *View* menu and the *Status Bar* is displayed. If the Status Bar is currently displayed, the check mark next to *Status Bar* on the *View* menu is removed, and the Status Bar disappears.

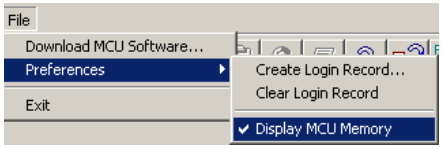


Showing and Hiding the Memory Indicators

The Memory Indicators are displayed in the *Status* bar at the bottom of the Main window.

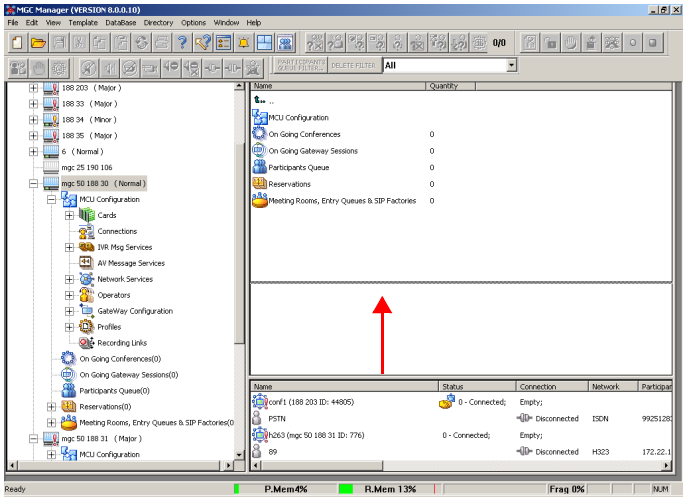
To show or hide the Memory Indicators:

- On the *File* menu, select **Preferences**, and then select **Display MCU Memory**. If the Memory Indicators are not currently displayed, a check mark is placed next to the *Display MCU Memory* option and the Memory Indicators are displayed. If the Memory Indicators are currently displayed, the check mark next to the *Display MCU Memory* option is removed, and the Memory Indicators disappear.

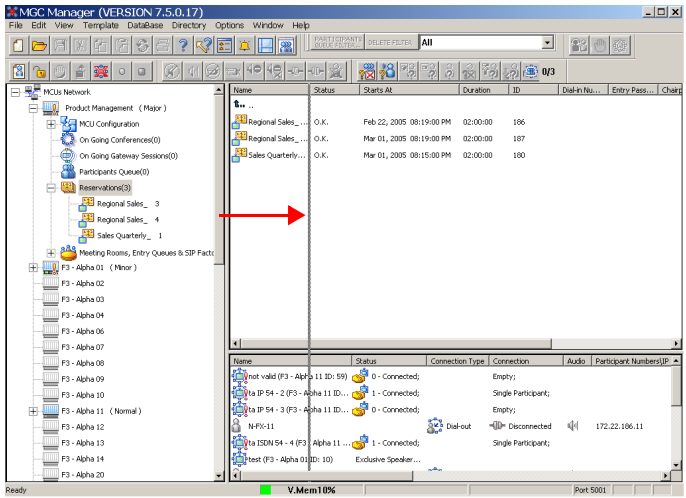


Resizing the Window Panes

The main window is made up of three panes. Each pane can be resized vertically or horizontally by dragging one of its sizing handles either up or down or side to side. This feature allows you to set the pane's size to best display additional information. It is especially useful when you have a long list of MCUs or when you monitor many conferences and participants.



Dragging the Monitor pane edge



Dragging the Browser pane edge

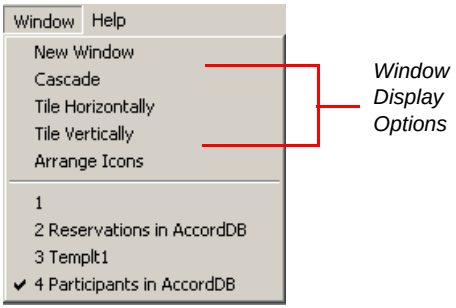
Figure 3-9: Resizing Window Panes

Multiple Window Display

You can display the application windows in various ways.

To change the display of multiple windows:

- On the *Window* menu, click **Cascade**, **Tile Horizontally**, or **Tile Vertically**.



The open windows are displayed in the selected view as, in the *Cascade* view shown in Figure 3-10:

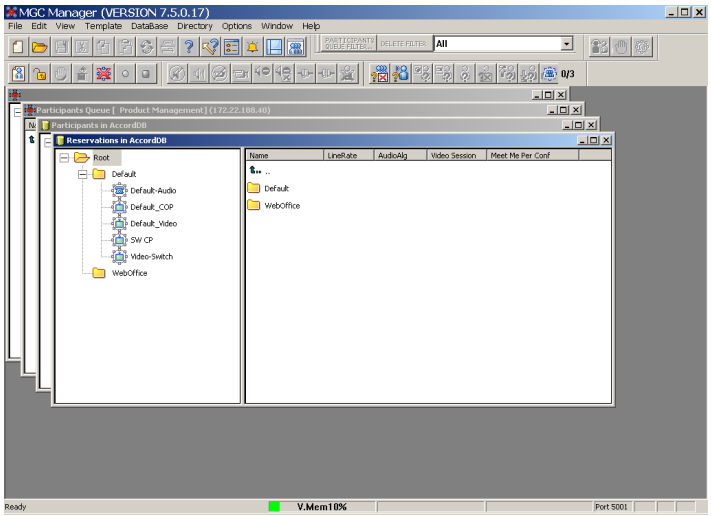


Figure 3-10: Application Windows in Cascade View

This display enables you to view multiple windows simultaneously, although only one window can be active at a time.

The MGC Manager Main Menu

The MGC Manager main menu bar provides the following options:

Table 3-2: MGC Manager Main Menu Options

Menu Name	Description
File	For creating or clearing a Login Record, downloading the MCU software, displaying or hiding the MCU Memory Indicators and exiting the application.
Edit	Used to *Cut* or *Copy* participants data.
View	Allows you to display or hide the status bar, toolbars and change the main window *View* mode.
Template	Allows you to create new conference or participant templates, or open existing templates in Polycom's proprietary format.
Database	Provides options for logging into the Database Manager module and for handling conference templates and participant templates stored in the database.
Directory	Allows you to open Public or Personal LDAP directories, and configure the Directory setting.
Options	For defining the general system parameters and defaults.
Window	For managing the currently opened window(s).
Help	To access help.

The MGC Manager Toolbars

The MGC Manager uses several toolbars to provide quick access to functions. These are the Main, Conference, Participant, Participants Queue, Participant Queue Filter and Q&A toolbars.

You can hide/display each toolbar and can move each one anywhere on the screen, even outside the MGC Manager window. For details, see “Showing and Hiding the Toolbars” on page 3-9.

To move a toolbar to a different location:

- Click the edge of the desired toolbar and drag it to the new location

Main Toolbar

The Main toolbar appears as follows:

Table 3-3: MGC Manager Main Toolbar Buttons

Button	Function	Description
	New	Creates a new Participant or Reservation Template file in the Polycom proprietary format.
	Open	Opens an existing Participant or Reservation Template file.
	Save	Saves the changes made to a Participant or Reservation Template file or to the database.
	-	Not in use.
	-	Not in use.
	-	Not in use.

Table 3-3: MGC Manager Main Toolbar Buttons (Continued)

Button	Function	Description
	Refresh	Refreshes the database to reflect all the changes made to the database User Tables by all the connected workstations.
	-	Not in use.
	About	Opens the MGC Manager *About* window.
	-	Not in use.
	Indications log window	Opens the *Indications Log* (Event Collector) window that displays the events collected by the system when the *Event Indication* option is enabled.
	Indications configuration	Opens the *Indications Configuration* window letting you configure the events that the system displays.
	Viewing modes	Toggles between Vertical and Horizontal display view modes of the main window.
	Participants Queue	Opens the Participants Queue window.

Conference Toolbar

The *Conference* toolbar is enabled when you click an On Going Conference icon.

The Conference toolbar contains the following buttons:

Table 3-4: Conference Toolbar Buttons

Button	Function	Description
	Add New Participant	Adds a new participant to the conference.
	Lock/Unlock Conference	Locks or unlocks the conference to dial-in participants.
	Place/Cancel Conference on Hold	Places a conference on hold or reinstates a conference that was placed on hold.
	Start/stop Voting	Starts/stops a voting session.
	Terminate the Conference	Terminates the conference.
	Start Recording	Starts a recording session.
	Stop Recording	Stops a recording session.

Participant Toolbar

The *Participant* toolbar is enabled when a Participant icon is clicked.

The *Participant* toolbar contains the following buttons:

Table 3-5: Participant Toolbar Buttons

Button	Function	Description
	Mute Audio	Mutes the audio channel transmission from the participant to the conference.
	Unmute Audio	Unmutes the audio channel transmission from the participant to the conference.
	Mute Video	Stops the video channel transmission from the participant to the conference.
	Unmute Video	Restarts the video channel transmission from the participant to the conference.
	Block Audio	Blocks the audio channel transmission from the conference to the participant.
	Unblock Audio	Restarts the audio channel transmission from the conference to the participant.
	Connect Participant	Connects the participant to the conference.
	Disconnect Participant	Disconnects the participant from the conference.
	Delete Participant	Deletes the participant from the conference. The conference resources are released for the use of other participants.

Participants Queue Toolbar

The *Participants Queue* toolbar is enabled when an Operator conference is running and a Participant icon is selected.

The *Participants Queue* toolbar contains the following buttons:

Table 3-6: Participants Queue Toolbar Buttons

Button	Function	Description
	Attend Participant	Moves the participant to the Operator conference for operator's assistance.
	Place Participant on Hold	Places the attended participant on Hold. The participant hears an IVR message while on hold.
	Move to Home Conference	Moves the participant to the Home (destination) conference.

Participant Queue Filter Toolbar

The *Participant Queue Filter* toolbar options enable displaying the list of participants who are waiting to be connected to the conference, according to selected criteria. For instructions about defining a new filter see Chapter 8, "Using Participants Queue Filters" on page 8-36.

Table 3-7: Participant Queue Filter Toolbar Buttons

Button	Function	Description
	Participant Queue Filter List	Lists the Participant Queue filters currently defined in the system.
	Participant Queue Filter	Opens the *Participants Queue Filter* dialog box where you define a new Participants Queue Filter.
	Delete Filter	Deletes the selected Participant Queue Filters.

Q&A Toolbar

The *Q&A* toolbar is enabled when you click an icon of a participant in an On Going Conference or the icon of a participant waiting in the Q&A queue.

The *Q&A* toolbar contains the following buttons:

Table 3-8: Q&A Toolbar Buttons

Button	Function	Description
	Clear QA	Clears all participants from the Question & Answer (Q&A) queue.
	Next Questioner	Lets the next participant in the Q&A queue ask questions.
	Add Participant to Q&A	Adds a participant to the Q&A queue.
	Remove Participant from Q&A	Removes a participant from the Q&A queue.
	Ask Question	Lets the participant ask a question, even if he or she is not next in queue.
	Stop Questioner	Stops the current questioner.
	Move Participant to First Position in Q&A	Moves the participant to the first place in the Q&A queue (enabling this participant to become the next questioner).

Table 3-8: Q&A Toolbar Buttons (Continued)

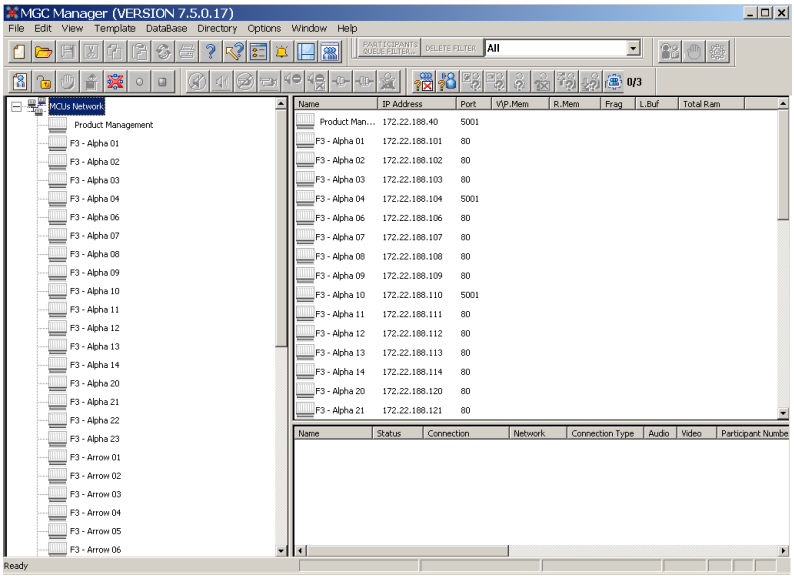
Button	Function	Description
	Move Participant to Last Position in Q&A	Moves the participant to the last place of the Q&A queue.
 	View Only Q&A Participants /View All	Displays only the participants waiting in the Q&A queue. Displays all the conference participants.
2/10	*Q&A Parties out of Total Parties*	The number of participants (out of the total number of participants in the conference) waiting in the Q&A queue.

Connecting to an MCU

Once an MCU is defined (for details, see the *MGC Administrator's Guide, Chapter 2*), the MGC Manager can be connected to all the defined MCUs simultaneously. This allows you to set up conferences, make reservations, monitor On Going Conferences and perform other activities on several MCUs.

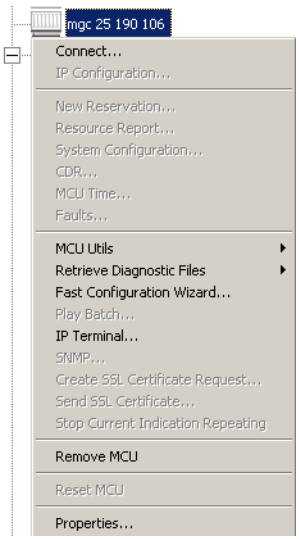
To connect the MGC Manager to an MCU:

1. In the *Browser* pane, expand the **MCUs Network** list.

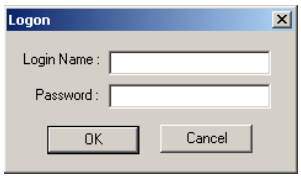

MGC Manager (VERSION 7.5.0.17)
File Edit View Template DataBase Directory Options Window Help
MCUs Network
Product Management
F3 - Alpha 01
F3 - Alpha 02
F3 - Alpha 03
F3 - Alpha 04
F3 - Alpha 06
F3 - Alpha 07
F3 - Alpha 08
F3 - Alpha 09
F3 - Alpha 10
F3 - Alpha 11
F3 - Alpha 12
F3 - Alpha 13
F3 - Alpha 14
F3 - Alpha 20
F3 - Alpha 21
F3 - Alpha 22
F3 - Alpha 23
F3 - Arrow 01
F3 - Arrow 02
F3 - Arrow 03
F3 - Arrow 04
F3 - Arrow 05
F3 - Arrow 06
Name IP Address Port VIP Mem R.Mem Frag L.Buf Total Ram
Product Man... 172.22.188.40 5001
F3 - Alpha 01 172.22.188.101 80
F3 - Alpha 02 172.22.188.102 80
F3 - Alpha 03 172.22.188.103 80
F3 - Alpha 04 172.22.188.104 5001
F3 - Alpha 06 172.22.188.106 80
F3 - Alpha 07 172.22.188.107 80
F3 - Alpha 08 172.22.188.108 80
F3 - Alpha 09 172.22.188.109 80
F3 - Alpha 10 172.22.188.110 5001
F3 - Alpha 11 172.22.188.111 80
F3 - Alpha 12 172.22.188.112 80
F3 - Alpha 13 172.22.188.113 80
F3 - Alpha 14 172.22.188.114 80
F3 - Alpha 20 172.22.188.120 80
F3 - Alpha 21 172.22.188.121 80
Name Status Connection Network Connection Type Audio Video Participant Numbe
Ready

A list of MCUs appears below the *MCUs Network* icon.

2. Double-click the **MCU** icon.
   Alternatively, right-click the *MCU* icon and then click **Connect**.



The *Logon* dialog box opens.



Each time the MGC Manager connects to an MCU, the operator is required to log into the MCU. In an environment with several MCUs, this can become a tedious task. To facilitate the operator login process, the MGC Manager creates a login record that can enable you to automatically log in to the MCU to which you are connecting. For more information, see “Automating the Login Process” on page 3-36.

3. Enter your *Login* name and *Password*, and then click **OK**.

   The connection to the MCU is initiated. The status of the MCU connection, as detailed in Table 3-9, appears in parentheses next to the MCU name.

Each MCU is initially configured with a default operator whose *Login Name* and *Password* are both POLYCOM. Additional operators can be defined. For details, see the MGC Administrator's Guide, Chapter 6.

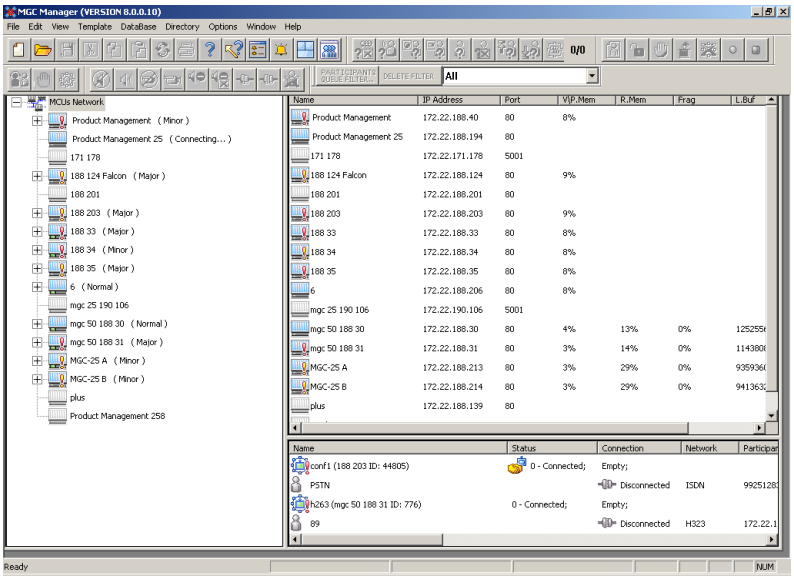

MGC Manager (VERSION 8.0.0.10)
File Edit View Template DataBase Directory Options Window Help
MCUs Network
Product Management (Minor)
Product Management 25 (Connecting...)
171 178
188 124 Falcon (Major)
188 201
188 203 (Major)
188 33 (Major)
188 34 (Minor)
188 35 (Major)
6 (Normal)
mgc 25 190 106
mgc 50 188 30 (Normal)
mgc 50 188 31 (Major)
MGC-25 A (Minor)
MGC-25 B (Minor)
plus
Product Management 258
Name IP Address Port V|P.Mem R.Mem Frag L.Buf
Product Management 172.22.188.40 80 8%
Product Management 25 172.22.188.194 80
171 178 172.22.171.178 5001
188 124 Falcon 172.22.188.124 80 9%
188 201 172.22.188.201 80
188 203 172.22.188.203 80 9%
188 33 172.22.188.33 80 8%
188 34 172.22.188.34 80 8%
188 35 172.22.188.35 80 8%
6 172.22.188.206 80 8%
mgc 25 190 106 172.22.190.106 5001
mgc 50 188 30 172.22.188.30 80 4% 13% 0%
mgc 50 188 31 172.22.188.31 80 3% 14% 0%
MGC-25 A 172.22.188.213 80 3% 29% 0%
MGC-25 B 172.22.188.214 80 3% 29% 0%
plus 172.22.188.139 80
Name Status Connection Network
conf1 (188 203 ID: 44805) 0 - Connected; Empty;
PSTN Disconnected ISDN
h263 (mgc 50 188 31 ID: 776) 0 - Connected; Empty;
89 Disconnected H323
Ready
NUM

Table 3-9: MCU Connection Status Icons

Icon	Status indication	Description
(Gray)	*Disconnected*	The MGC Manager is disconnected from the MCU.
	Connecting	Connection to the MCU in progress.

Table 3-9: MCU Connection Status Icons (Continued)

Icon	Status indication	Description
	Normal	The connection is OK and the MCU is in the Normal state. When connected (Normal status), a green LED in the MCU icon is lit.
	Startup	The connection is OK and the MCU is starting up (after reset).
	Resetting	The MCU is resetting.
	Low Memory	The system has used up all its memory resources. Disconnect all running conferences and reset the MCU.
	Bad Connection	The connection between the MGC Manager and the MCU is lost due to LAN problems.
	Major	A major error occurred, such as a card was removed from the MCU. The exclamation point on the icon initially appears in red and blinks. After the Fault file is viewed to identify the error, the exclamation point color changes to yellow. Consult your system administrator.
	Minor	A minor error occurred. The exclamation point on the icon initially appears in red and blinks. After the Fault file is viewed to identify the error, the exclamation point color changes to yellow. Consult your system administrator.

Using Default Templates to Start a Conference

Reservation Templates

A Reservation template includes the conference parameters, such as the conference media (audio, video), video session, line rate, video protocol and other video parameters, IVR and more. The Reservation Template may include the conference participant parameters.

Using a Reservation template, you can schedule a conference to start immediately (On Going Conference), or to start automatically at a predefined date and time (Reservation).

For information on defining a Reservation template, see the *MGC Manager User's Guide, Volume II, Chapter 7, Reservation Templates"*.

Default Reservation Templates

Five default Reservation templates are installed with the MGC Manager database, to enable you to quickly start conferences:

- **Default-Audio**: Audio Only with Default IVR Service
- **Default_COP**: Conference On Port at 384 Kbps
- **Default_Video**: Continuous Presence Conference at 384 Kbps
- **SW CP**: Software Continuous Presence (H.323 only) at 384 Kbps
- **Video-Switch**: Video Switching at 384 Kbps

In order to run a **Default_Video** or **Default_COP** conference, the Video+ card and the MGC Manager version 5.6 or later must be installed in your system.

When you first start the MGC Manager application, the *Reservations in Database* window automatically opens listing the Default group. However, if you are logged out, you must log in.

For a detailed description of the login process, see MGC Manager User's Guide, Volume II, Chapter 7, "Logging into the User Tables of the Database."

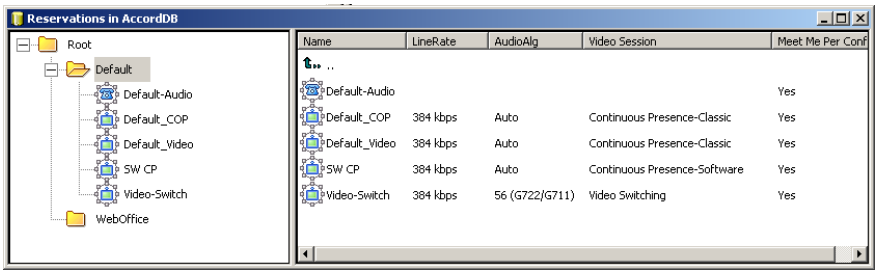
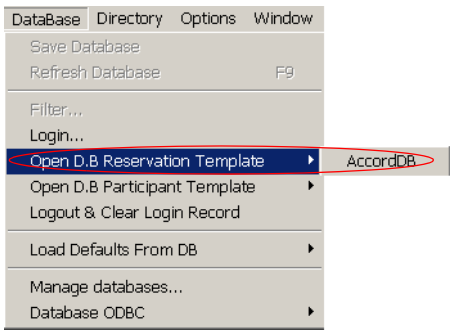


Figure 3-11: Reservations in Database Window

To start an On Going Conference from a Reservation template:

1. Connect to an MCU.
   If the *Reservations in Database* window is hidden behind other windows, display it on top of the MGC Manager Main window on the *Window* menu, click **Reservations in** <*database name*>.

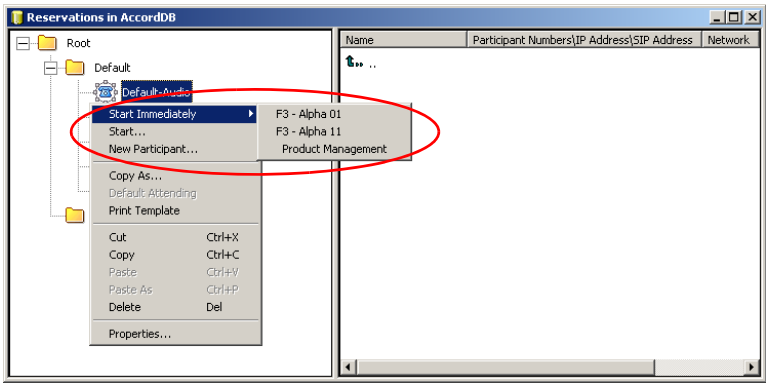
   If the database window is closed, on the *DataBase* menu, click **Open D.B. Reservation Template** and then select the database storing the Reservation template.



The *Reservations in Database* window is displayed.

2. If required, expand the *Groups* hierarchy until you locate the desired Reservation template. By default, the Default Group is expanded and this step may be skipped.
3. Right-click the icon of the Reservation template you want to use to start the conference, and then click **Start Immediately**.

   If there are several MCUs connected to the same MGC Manager, you also need to select the MCU to host the conference.



An On Going Conference is created and added to the list of On Going Conferences. You can monitor the status of the conference and its participants as described in Chapter 5.

- When starting an On Going Conference, the system checks if the participants assigned to this conference are already included in any other On Going Conference or Reservation that is scheduled to start at the same time. If such participants are found, the *Duplicate Booking* dialog box opens listing the conflicting participants. For more details, see *Chapter 4, "Resolving Scheduling Conflicts" on page 4-67.*.
- If the MCU does not have enough resources to run the conference, an appropriate error message is displayed.

You can add participants to the conference, or dial-in participants can now connect to the conference. For more information about participants connection to the conference, see Chapter 4, "Joining an On Going Conference" on page 4-70. For more information about adding participants to the On Going Conference, see Chapter 4, "Conference Properties - Participants Options" on page 4-48.

To schedule a conference to start later (a Reservation):

1. Right-click the *Reservation Template* icon and then click **Start**.

   The *Conference Properties - Schedule* dialog box opens.

2. Select the conference *Starting Date* and *Time.*
3. Click **OK**.

   The conference is added to the *Reservations* list.

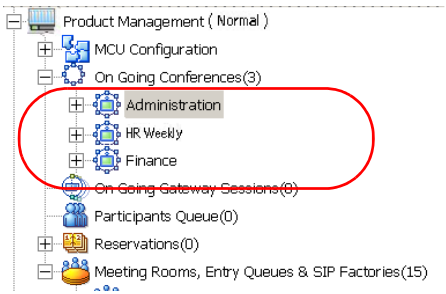
Viewing Conference Lists

Each MCU has three conference lists assigned to it. All conferences that are currently running are detailed in the *On Going Conferences* list. All conference reservations defined on the MCU are detailed in the *Reservations* list. "Passive" conferences, which are activated when the first participant connects to the conference, are listed under *Meeting Rooms, Entry Queues & SIP Factories*.

Before performing the following procedures, connect to the MCU whose conference lists you want to display.

To view an MCU's list of On Going Conferences:

1. In the *Browser* pane, expand the *MCU* tree to display its options.
2. Expand the **On Going Conferences** tree.
   All currently running conferences are listed below the *On Going Conferences* icon. Each conference is identified by an icon and a name.



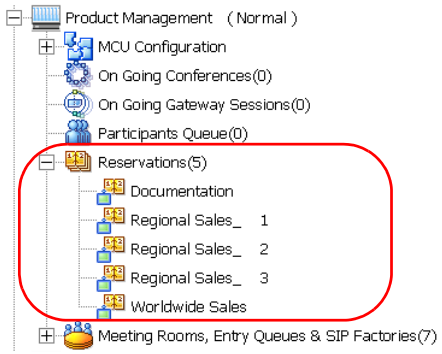
   On first entry, or if no conferences are running, the *On Going Conferences* list is empty.

To view an MCU's list of reserved conferences:

1. In the *Browser* pane, expand the *MCU* tree to display its options.
2. Expand the **Reservations** tree.

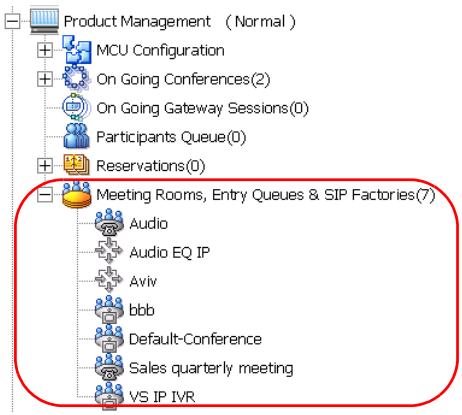
   A list of reserved conferences is displayed below the *Reservations* icon. Each reservation is identified by an icon and a name. For recurrent

reservations, the name is followed by a number identifying the reservation occurrence.



To view an MCU's list of Meeting Rooms, Entry Queues and SIP Factories:

1. In the *Browser* pane, expand the *MCU* tree.
2. Expand the **Meeting Rooms, Entry Queues & SIP Factories** tree. A list of Meeting Rooms, Entry Queues and SIP Factories is displayed below the *Meeting Rooms* icon. Each Meeting Room, Entry Queue or SIP Factory is identified by an icon and a name.



If no Meeting Rooms, Entry Queues or SIP factories were defined, the list is empty.

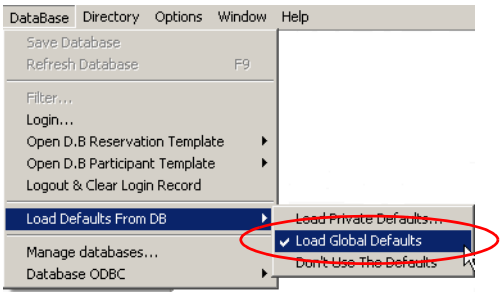
Loading the User Defined Default Set to the MGC Manager Application

User Defined fields in the *Conference Properties* and *Participant Properties* dialog boxes allow you to add general information about the conference or the participant. These fields are also included in the CDR file, which is used for reporting and billing purposes. You can define the titles of the User Defined fields in the MGC Database Manager -> User Defined Defaults. For more details, see the *MGC Manager User's Guide, Volume II, Chapter 6, "Defining User Defined Defaults"*.

To view/hide the User Defined fields and their titles in the *Conference* and *Participant Properties* dialog boxes, you must load the Defaults to the MGC Manager.

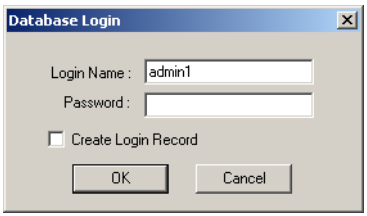
To load the User Defined Defaults to the MGC Manager:

1. In the MGC Manager window, on the *Database* menu, click **Load Defaults from DB** and then click **Load Global Defaults** to load the Defaults, or **Load Private Defaults** to load the set designated for personal usage.



If *Load Private Defaults* is selected, the *Database Login* window opens.

2. Enter your *Login Name* and *Password* and click **OK**.



The *Global Defaults* or *Private Defaults* set is now loaded and active in the MGC Manager and a check mark appears next to the selected option in the *Load Defaults from Database* menu.

Commands Shortcut Keys

Shortcut keys can be configured to quickly accomplish tasks you perform frequently. For example, pressing <CTRL> + <D> terminates an On Going Conference. The following table lists the default shortcut keys available in the MGC Manager application. For more details, see the *MGC Administrator's Guide, Chapter 5*.

Table 3-10: Command Shortcut Keys

Shortcut Keys	Function
<Alt> + <C>	Clears the participants listed in the Q&A queue.
<Ctrl> + <N>	Creates a new Participant or Reservation Template file.
<Ctrl> + <O>	Opens a Participant or Reservation Template file.
<Ctrl> + <S>	Saves a Participant or Reservation Template file, or saves changes to the database.
<Ctrl> + <C>	Copies the On Going Conference, Reservation, Entry Queue or Meeting Room properties to the clipboard or copies the participant's properties to the clipboard.
<Ctrl> + <X>	Copies the conference or participant properties to the clipboard while deleting the original item.
<Ctrl> + <V>	Pastes participant properties from the clipboard into an On Going Conference, Reservation, Conference Template (template file or database) or Participant Template (template file or database). Pastes Conference properties from the clipboard to On Going Conferences list, Reservations list, Entry Queue list, Meeting Room list or Reservations database.

Table 3-10: Command Shortcut Keys (Continued)

Shortcut Keys	Function
<*Ctrl*> + <*P*>	Pastes participant properties from the clipboard into an On Going Conference, Reservation or Conference Template, while opening the Participant Properties dialog box for modification of the participant's settings. Pastes conference properties from the clipboard to On Going Conferences list, Reservations list, Entry Queue list, Meeting Room list or Reservations database or Template file, while opening the Conference Properties dialog box for modification of the conference settings.
<*Ctrl*> + <*R*>	Connects/reconnects a participant to an On Going Conference.
<*Ctrl*> + <*T*>	Disconnects a participant from the On Going Conference.
<*Ctrl*> + <*M*>	Mutes a participant audio channel.
<*Ctrl*> + <*U*>	Unmutes a participant audio channel.
<*Ctrl*> + <*I*>	Sets a participant's Connection Type to dial-in.
<*Ctrl*> + <*A*>	Sets a participant's Connection Type to dial-out.
<*Shift*> + <*F1*> or <*F1*>	Accesses the relevant Help topic.
<*F2*>	Moves a participant to the Operator conference for assistance.
<*F3*>	Moves a participant from the Operator conference to the destination (Home) conference.
<*F4*>	In the Attended Participant dialog box, the operator can place a participant on hold.
<*F5*>	In the Attended Participant dialog box, the operator can move a participant to a selected conference.
<*F6*>	In the Attended Participant dialog box, places a participant next in line for operator attention.
<*F8*>	Adds a new participant to an On Going Conference, Reservation or Meeting Room.

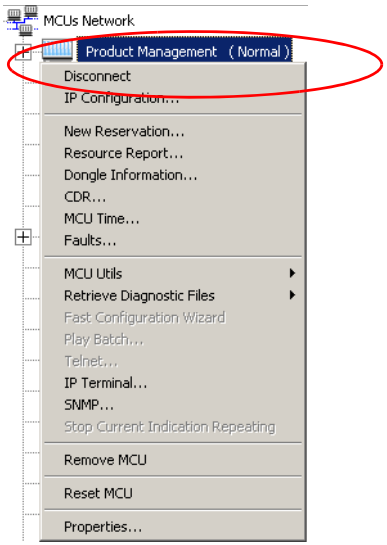
Table 3-10: Command Shortcut Keys (Continued)

Shortcut Keys	Function
<F9>	Refreshes the database.
<F10>	Temporarily moves the Operator to the conference for short announcements and assistance. (Operator Join)
<F11>	Ends the Operator's temporary connection to the conference and returns to the Operator conference. (End Operator Join)
<F12>	Moves the next participant in line from the Participants Queue to the Operator conference for assistance.
<Del>	Terminates an On Going Conference, or deletes a Reservation, Meeting Room, Participant or any template.

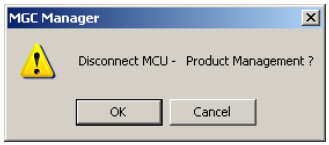
Disconnecting an MCU

To disconnect the MGC Manager from an MCU:

1. In the *Browser* pane, right-click the *MCU* icon and then click **Disconnect**.



A dialog box appears prompting you to confirm the disconnection.



2. Click **OK** to disconnect.
   The MCU status indicator disappears from the *Browser* pane, and the MCU icon is disabled.

Disconnecting the MGC Manager from an MCU does not change any MCU settings - it merely terminates your access to the MCU, so you cannot view or affect its contents.

Automating the Login Process

Each time the MGC Manager connects to an MCU, the operator is required to log in to the MCU. This becomes tedious when the operator connects and disconnects from several MCUs regularly.

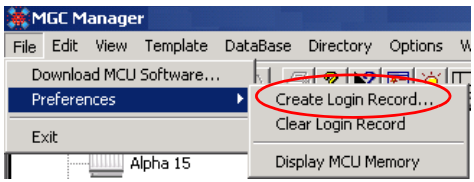
The *Create Login Record* option allows you to define your *Login Name* and *Password*. The definition remains in place until the *Clear Login Record* option is selected. Using the Login Record, automatically connects you to the MCU.

The *Clear Login Record* option deletes the last login record. The next time you connect to an MCU you will be required to enter your name and password

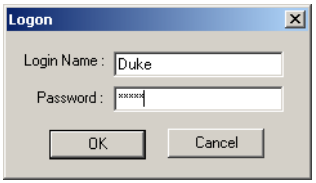
- The same Login Record is used for all MCUs. If you have different login names and/or passwords on different MCUs, you may need to use the *Clear Login Record* option before attempting a connection using a different login name and password.
- When *Strong Password* is enabled for the MCU, the *Create Login Record* option is disabled, and the operator must login each session.

To create a login record:

1. On the *File* menu, click **Preferences**, and then click **Create Login Record**.



The *Logon* dialog box appears.



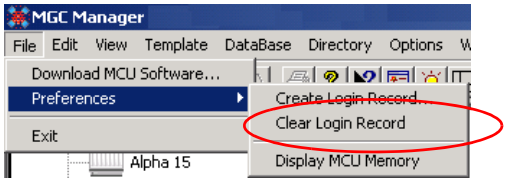
2. Enter your *Login* name and *Password*, and then click **OK**.

From this time on, you will not be prompted to supply your user *Login Name* and *Password* whenever you connect to an MCU until you clear the Login Record.

To clear a login record:

You may need to disable your login record in order to maintain site security, for instance, when you go home after a day's work.

- In the *File* menu, click **Preferences**, and then click **Clear Login Record**.



The Login Record is cleared. You will now be prompted to supply your *Login Name* and *Password* whenever you connect to an MCU unless you create a new Login Record.

4

Defining Conferences and Participants

Defining new conferences is one of the major tasks to perform in the MGC Manager. The system allows you to set up any type of Audio Only or video conference. This chapter describes the process of defining Standard On Going video conferences and adding participants to the Conference. For information about Audio Only conferences, see the *MGC Manager User's Guide, VoicePlus Edition.*

About Conferences

MGC Manager provides several methods to initiate and schedule conferences to suit many different needs. The following methods are available:

- Scheduled conferences for setting up individual conferences that start immediately (On Going Conferences) or later (Reservations).
- On-demand (reservation-less) conferences, that are set up once and used many times (Meeting Rooms and Entry Queues)

Each method is represented in the MCU tree by an appropriate entry or icon.

The scheduling method is also reflected in the selection of the conference type. The following conference types are available:

- **Standard** - a scheduled On Going Conference or Reservation that runs once and is deleted from the system once it ends.
- **Meeting Room** - a conference that is defined once and used many times for unscheduled ad hoc conferencing.
- **Operator Conference** - a special conference designated for operator usage in attended conferencing.

For each conference you specify whether participants connect to the conferencing system by *dialing in* to the conference or by having the conferencing system (MCU) *dial out* to the participant. For dial-in connections, you have to define whether a single dial-in number will be used for all dial-in connections or a different dial-in number will be assigned to each conference or each participant.

In addition to the dialing method, you must define whether the conference is operator Attended or Unattended.

When defining a conference, you select the media resources (Audio Only or Video & Audio), the parameters which determine the quality of the media transmission, and the operations that can be performed during the conference.

Scheduled Conferences

Standard conferences can be arranged ahead of time and are scheduled to start immediately or later. Scheduling involves the definition of all the conference parameters, including the conference type, attended/unattended mode, line rate, media quality, and the conference participants (optional). Reservation Templates containing conference parameters can be used to schedule conferences saving the need to repeatedly define new similar conferences (with the same parameters). Different templates can be defined for specific conference settings.

Conferences can be scheduled via the MGC Manager, the browser based WebCommander application, or via Microsoft Outlook using the MGC Personal Scheduler Add-on.

On Going Conferences

An On Going Conference is a conference that starts immediately or when the scheduled reservation date and time is reached. An On Going Conference can be started in one of the following ways:

- From the *On Going Conferences — New Conference* definition
- From a *Reservation Template* (immediately)
- When the starting date and time scheduled in a Reservation is reached

Reservations

Reservations are conferences scheduled to start in the future. You can schedule Reservations in using of the following methods:

- From *Reservations — New Reservation* definition
- From a *Reservation Template* (Start)

For a detailed description, see Chapter 9, "Conference Reservations".

On-demand (Reservation-less) Conferencing

Reservation-less conferencing enables participants to immediately start an On Going Conference from their endpoint, with no advanced scheduling. The MGC Manager offers two methods for Reservation-less conferencing:

- Ad Hoc Conferencing
- Meeting Rooms

Ad Hoc Conferencing

In Ad Hoc conferencing, participants connect to an Ad Hoc-enabled Entry Queue. The participants are prompted for the destination conference Numeric ID. If no conference with a matching Numeric ID is running, and the participant is authorized to create a conference, the system creates a new On Going Conference based on the conference parameters defined in the Profile assigned to the Entry Queue. All other participants connect directly to the newly created conference. In this method, the conference Profile is created once and is used repeatedly to create numerous conferences.

This conferencing method is often used to eliminate the need to define individual conferences for all employees in an organization and it enables them to start On Going Conferences from their endpoints, on the fly.

Meeting Rooms

Meeting Rooms are unscheduled conferences that are created once and can be activated as many times as required. A Meeting Room remains in MCU memory in passive mode until the first participant connects to it and activates the conference. The Meeting Room owner informs the participants of the conference start date and time, dial-in number and the Numeric ID so they can join the conference. When the conference ends, the Meeting Room reverts to passive mode until the next activation and it can be modified between activations from the Meeting Rooms list.

Using this method, a separate Meeting Room must be defined for each employee in the organization, which may be problematic in very large organizations, where the number of required Meeting Rooms may exceed the limit of 2000 conferences stored in the MCU memory.

Meeting Rooms can be defined only if the appropriate *Customer Permission* defined in the "*system.cfg"* is installed in the MGC Manager application. For more details, refer to the *MGC Administrator's Guide Chapter 5*, "*Edit "system.cfg", CUSTOMER_PERMISSION."*

Conference Types

Depending on the scheduling method required, the following conference types are available:

- **Standard -** An individual conference that is scheduled once, and when the conference ends, it is automatically deleted from the MCU. You can schedule an On Going Conference, a Reservation or a recurring Reservation. For a detailed description of regular and recurring Reservations, see Chapter 9.
- **Meeting Room -** A conference without resource allocation or starting date and time, that is defined once, but can be activated many times. A Meeting Room remains in a passive state between activations until the first participant connects to it and activates the conference. When activated, it becomes an On Going Conference. This is one of the reservation-less methods used for on-demand conferencing. For a detailed description of Meeting Rooms, *see Chapter 7*.
- **Operator -** A special conference used to assist participants in Attended conferences. It enables the operator to have a private, one-on-one conversation with one participant at a time without disturbing the On Going Conferences or being heard by other participants. For a detailed description of attended conferencing, see *Chapter 8*.

The conference general and media parameters are defined in the same way for all these conference types.

Single-dial Entry Queue

An Entry Queue is a special routing lobby to which one or several dial-in numbers are assigned.Once connected to the Entry Queue, participants are routed to their destination conference according to the conference Numeric ID or password (depending on the MCU configuration). A different Entry Queue may be defined for Video and for Audio Only participants, or the same Video Entry Queue can be used by all participants provided that the audio algorithm is set to G.711 (telephone standard).

For a detailed description of Entry Queues, see *Chapter 8*.

Attended and Unattended Conferences

Audio Only and Video conferences can be managed by an operator or run unattended in which case the participants manage the conference themselves with the meeting organizer optionally having additional privileges.

In unattended conferencing, no operator is available for assistance during the connection process or during the On Going Conference. Participant connection to the conference is guided by voice prompts and participants or meeting organizers can control certain aspects of the conference.

In attended conferencing, an operator controls the connection process of participants and the On Going Conference. An attended conference is a service designed usually for large conferences that require the personal touch.

There may be configurations where the MGC system is set to unattended mode, but operator assistance is available upon request.

The conferencing attended/unattended mode is set in the IVR module, either at the Entry Queue level (in the Entry Queue Service) or the conference level (in the IVR Service).

Operator Attended Conferences

In many attended conferences, the operator manages and controls participants connection to the conference. Usually, the name and the telephone numbers of each dial-out participant are given to the operator at the time the reservation is made and the connection process can be initiated by the operator via the MGC system. Dial-in participants can also be greeted and guided to the appropriate conference by the operator. Once the conference has begun, operator assistance continues to be available upon request, and the operator can perform various operations, such as manage Question-and-Answer and voting sessions, connect and disconnect participants, mute/unmute participants, start

a lecturing session, place the conference on hold and lock/unlock the conference to dial-in participants.

Participants Queue

The *Participants Queue* is a list of all participants in all conferences that are waiting for the operator's assistance or who are on hold. The *Participants Queue* is intended mainly for attended conferences. The *Participants Queue* special toolbars, command buttons and options provided in the *Participants Queue* window, enable the operator to manage and control participant connection to the destination conference.

Greet and Guide conference (Welcome Queue)

An Attended conferencing method using an AV Message Service (instead of an IVR Service) intended for MGC unit with the standard Audio and Video cards. In MCUs with Audio+ and Video+ cards, attended conferencing is performed with the IVR module. For a detailed description, see the *MGC Manager User's Guide Volume II, Chapter 2, "AV Message Services and Greet and Guide Conferences"*.

Unattended Conference

An unattended conference is usually a reservation-less conference that is started by participants from their endpoint. In an unattended conference, it is the conference chairperson who controls all features and functions of the conference either via the touch-tone telephone, a DTMF input device such as a remote control or via the Internet. Conference participants can perform simple operations (such as muting or unmuting their line or modifying their volume) from their touch-tone telephone or DTMF input device. This type of configuration requires the installation of the Audio+ card in the MCU. Although an operator is not needed for unattended conferences, one can be on hand to help participants during the on going conference, via the MGC Manager or WeBcommander applications.

IVR enabled conferences and conferences accessed via the Entry Queue require the installation of the Audio+ card in the MCU.

Conference Media Types

Conferences can be of two media categories: **Audio Only** and **Video and Audio**.

Audio Only Conferences

Audio Only conferences include only Audio participants and enable the use of the IVR module capabilities. In an Audio Only conference, participants can connect to the conference using different network connections: PSTN/ISDN or T1-CAS lines, cellular phones, or VoIP (H.323 or SIP). VTX 1000 users can connect to conferences as audio only participants, while enjoying wideband, high quality audio.

The IVR module offers chairperson "dial-out" inviting participants to join the On Going Conference, chairperson and participant control of the conference via touch-tone commands (DTMF codes), voting and Question and Answer sessions, and many more. For detailed information about the Audio Only conferences and features, see the *MGC Manager User's Guide, VoicePlus Edition.*

Video Conferences

Video Conferences can include both Video and Audio as well as Audio Only participants. Participants can connect to the video conference using different network connections: ISDN, IP (H.323 and SIP), ATM and MPI (serial connection). Various parameters affect the video display and quality.These parameters are affected by the Video Session type, the conference line rate and the video quality parameters such as video protocol, video resolution, etc.

Video Conference Settings

When defining a new video conference, you select the parameters that determine the video display on the participant's endpoint and the qualify of the video.

Video Session Types

The video session type determines the video display options (full screen or split screen with all participants viewed simultaneously) and the method in which the video is processed by the MCU (with or without using the MCU's video resources). The Session Types are: Video Switching, Transcoding and Continuous Presence.

Video Switching (VSW)

A conference in which all participants see the same video picture (full screen) and does not use the MCU video resources. The current speaker is displayed in full screen on all the participants' endpoints, while the speaker sees the previous speaker. Switching between participants is voice-activated; whenever a participant starts to speak, he or she becomes the conference speaker and is viewed on all screens. All conference participants must use the same line rate and video parameters such as video protocol, frame rate, annexes and interlaced video mode as no video processing is performed. However, the **Highest Common Mechanism** can be enabled for the video parameters, allowing the system to select the best video parameters that can be supported by all the endpoints currently connected to the system, and to dynamically change them when a new endpoint joins or leaves the conference. It improves the connectivity between endpoints, eliminates Secondary connections, and facilitates Entry Queue Access and participant's moves during conferences. The Highest Common mechanism is available with both H.320 and H.323 endpoints, but is not available with SIP endpoints. The Highest Common mechanism is not supported in Cascading conferences, and in conferences set to H.264*/H.264L video protocols (only the standard H.264 is supported) or Dual Stream Mode - People & Content V0 and Visual Concert PC & FX.

Transcoding

A conference in which all participants see the same video picture (full screen) but participants can use the endpoint's highest video and audio capabilities to achieve the best video quality display. Because each video participant is connected using the endpoint's highest possible video quality, this conference type requires appropriate video card resources for processing different inputs from the endpoints. Transcoding is performed between different line rates, audio algorithms, video formats, video frame rates, aggregation modes (Bonding/H.221) and data rates.

Continuous Presence (CP)

A conference in which several participants can be viewed simultaneously and each connected endpoint uses its highest video, audio and data capabilities. Therefore, this conference type requires appropriate video card resources for processing different inputs from the endpoints. You can select the arrangement of the video windows (Video Layout) when several participants are viewed simultaneously. The video layout can be selected from the following categories: Classic, Quad Views and Software.

In *Classic* Continuous Presence conferences there are 21 layout options to display participants, depending on the number of connected participants. As each participant uses a different video port on the video card, full Transcoding per participant and Personal Layout (selection of video layout per participant) are available during the conference.

In Continuous Presence-*Quad Views* sessions, layouts intended for large conferences (10+ participants) are available for selection. This mode is available only with the Video+ card.

Continuous Presence-*Software* (Software CP) conference is a software solution for IP Only conferences that use fewer video card resources. In this mode, only two types of video layouts are available for selection: 2x1 and 2x2. If the conference includes fewer participants than windows, the empty layout windows are grayed. For a detailed description of Software CP conferences, see the *MGC Manager User's Guide, Volume II, Chapter 1*.

Video Quality Parameters

The main parameters that define the quality of a video conference are:

- **Line Rate -** The transfer rate of video and audio streams. The higher the line rate, the better video quality that can be viewed. In Video Switching conferences, all conference participants must connect using the same line rate, therefore the participant with the lowest line rate connection determines the line rate for the conference. For more information, see *"Conference Properties - Settings Parameters" on page 4-29*.
- **Audio Algorithm -** The audio compression algorithm determines the quality of the conference audio. For more information, see *"Conference Properties - Settings Parameters" on page 4-29*.
- **Video protocol, video format, frame rate, annexes, and interlaced video mode** - These parameters define the quality of the video images. Setting the video protocol to H.263 results in a better image quality than using H.261, and H.264 protocol provides better compression of video images in line rates lower than 384 Kbps. However, not all endpoints support H.263, or H.264, therefore in a Video Switching session which requires that all participants use the same video protocol, video format and frame rate, it is the endpoint that supports the lowest video quality that dictates the video settings for the conference. For more information, see *"Conference Properties - Settings Parameters" on page 4-29*.
- **Encryption** is available at the conference and participant level, based on AES 128 Media Encryption and DH 102 Key Exchange standards.

For more information on encryption, see the *MGC Manager User's Guide Volume II, Chapter 1, "Media Encryption"*.

Additional Video Conference Types

Video conferences can include additional features, for example to increase the number of participants in a single conference or to allow application sharing during the conference.

Conference On Port (COP)

In a Conference On Port, all participants use a single video port for the conference. This enables the selection of a video layout for the conference but all the participants, including the speaker, view the same layout and the same participants. Personal layout selection is not available in COP and the video quality is determined by the highest common video parameters and by the video line rate. In order to maintain a minimum video quality for a Conference On Port, there is a minimum threshold line rate that participants must support in order to connect with video. This minimum threshold line rate is determined according to the conference Line Rate. Participants attempting to connect at rates below the minimum threshold are connected as *Secondary* (Audio Only). For example, if the conference *Line Rate* is 768 Kbps, participants must connect with a minimum line rate of 384 Kbps. If they connect at a lower rate (128 or 256 Kbps) they will connect as Secondary (Audio Only).

Table 4-1 lists the minimum line rates necessary to connect to a Conference On Port.

Table 4-1: Conference On Port Line Rate - Minimum Thresholds

Defined Conference Line Rate (in Kbps)	Minimum Participant Line Rate Necessary for Video Connection (in Kbps)
128	Participants will connect with video if a video session can be established.
256	128
384	128
512	256
768	384
1920	768

Conference On Port setting is suitable for large Continuous Presence conferences (up to 128 participants for a single video card) for which you do not have enough available video resources or if several Continuous Presence conferences are running on the MCU at the same time and you do not have enough video resources to run all of them simultaneously.

Conference On Port guidelines:

- Limited to 128 participants with a single video card
- Available only with the Video+ card
- Lecture Show function is disabled
- Not available with Cascading conferences

Dual Stream Mode

In this mode, the endpoint sends two separate video streams: video and data. The data streams are treated differently by the endpoint, and may be shown on separate screens. Depending on the endpoints that send and receive the video streams, the following dual stream modes are available:

- H.239/People+Content
- People and Content V0
- Polycom Visual Concert (PC/FX)
- Duo Video

For a detailed description of Dual Stream Mode video conferences, see the *MGC Manager User's Guide, Volume II, Chapter 1, "Advanced Conference Settings"*.

Lecture Mode

Lecture Mode allows you to designate one participant as the lecturer. The lecturer is the only one seen by all the other participants throughout the conference, in full screen. Lecture Mode enables automatic switching between the conference participants in the speaker window, allowing the conference speaker to see all the other conference participants (one participant after the other or all of them in a Continuous Presence layout).

For a detailed description of Lecture options that can be set in a video conference, see *Chapter 10, "Lecture and Presentation Options"*.

Cascading

Cascading enables users to run conferences that are distributed among two or more conferences and MCUs. A participant who dials from one MCU to another establishes the link between the conferences.

The conferences that are part of a cascading conference may be run:

- on the same MCU, to overcome the maximum number of participants per conference
- on separate MCUs, to utilize additional resources or connect participants to their local MCU

In addition, you can enable H.239 People+Content dual stream mode conferences with H.323 cascading.

The Highest Common mechanism is disabled in Cascading conferences. When defining a Cascading conference, all the cascaded conferences must be set to the same video protocol.

For a detailed description of Cascading conference options, see "Defining Cascading Conferences" in the *MGC Manager User's Guide, Volume II, Chapter 1, "Advanced Conference Settings"*.

For information about H.243 and MIH Cascading conferencing, see the *MGC Manager User's Guide, Volume II, Chapter 5.*

T.120 Conference

The MGC Manager enables you to define conferences using the T.120 standard that contains a series of protocols and specifications for application sharing in multi point data communications. The following options are available, depending on the participant equipment and software:

- Application sharing allowing two or more conference participants to work on the same document/application even if only one participant has the application. In application sharing, one participant launches the application and it runs simultaneously on all the other computers.
- File transfer to all conference participants.
- Chat or "Whiteboard" in which participants communicate with each other by writing.

In all these modes, the participants can view and hear each other.

For more information on advanced video settings, see the *MGC Manager User's Guide, Volume II, Chapter 1, "Advanced Conference Settings"*.

Conference Types by Media

Table 4-2 details the conference and session types according to Audio and Video media options.

Table 4-2: Conference Types by Media

Media	Conf Type	Network	Session Type	Availability
Audio	Standard and Meeting Room	All: ISDN, ATM, MPI, T1- CAS, IP	Audio Only	Available for ISDN and IP. Requires an MGC unit equipped with an Audio+ card.
		IP only	Audio Only	
	Operator	All: ISDN, ATM, MPI, T1- CAS, IP	Audio Only	
		IP only	Audio Only	
Video	Standard and Meeting Room	All: ISDN, ATM, MPI, T1- CAS, IP	• Video Switching • Transcoding • Continuous Presence — Classic — Quad Views	Video conferences connect T1-CAS endpoints as Audio Only.
		IP only	• Video Switching • Transcoding • Continuous Presence — Classic — Quad Views — Software	Software CP is available for IP only conferences.
	Operator	All: ISDN, ATM, MPI, T1- CAS, IP	Transcoding	Video conferences connect T1-CAS endpoints as Audio Only.
		IP only	Transcoding	

Conference Media Type According to MCU Configuration

The functional modules installed in the MCU determine the conferences that can be run by the MCU.

Table 4-3 lists the currently available conference types and functionalities as applicable to specific MCU configurations.

Table 4-3: Conference Types According to MCU Configuration

MCU Configuration	Available Conference Types	Functionality
• Audio+ • Net-2/4/8 ISDN card • IP card (optional)	**Audio Only**	• Enables Standard/Meeting Rooms/ Meet Me Per Conference Audio Only conferences • IVR enabled features • Entry Queues • Enables ISDN and PSTN participants • Enables VoIP (H.323) participants if an IP card is installed (SIP participants require installation of an IP+ card)
• Audio+ • Net-2/4/8 ISDN card • Net-2/4/8 T1-CAS card (optional) • IP card (optional)	**Audio Only**	• Enables Standard/Meeting Rooms/ Meet Me Per Conference Audio Only conferences • Enables IVR features • Entry Queues • Enables ISDN,T1-CAS and PSTN participants • Enables VoIP (H.323) participants if an IP card is installed (SIP participants require installation of an IP+ card)

Table 4-3: Conference Types According to MCU Configuration (Continued)

MCU Configuration	Available Conference Types	Functionality
• Audio • Video • Net-2/4/8 ISDN card • IP card • MUX card	**Video and Audio**	• Enables Standard/Meeting Rooms/ Meet Me Per Conference Video conferences • Enables ISDN and PSTN participants • Enables VoIP (H.323) participants (SIP participants require installation of an IP+ card) • No IVR-enabled features • No Entry Queues • No Video+ capabilities • No encryption capabilities
• Audio+ • Video+ • Net-2/4/8 ISDN card • IP card • MUX card	**Audio Only** **Video and Audio**	• Enables Standard/Meeting Rooms/ Meet Me Per Conference Video conferences • Enables VoIP (H.323) participants (SIP participants require installation of an IP+ card) • IVR-enabled features • Audio Only and Video Entry Queues • COP conferences • Video+ capabilities • No encryption capabilities
• Audio+ • Video+ • Net-2/4/8 ISDN card • IP+ card • MUX+ card	**Audio Only** **Video and Audio**	• Enables Standard/Meeting Rooms/ Meet Me Per Conference Video conferences • Enables VoIP (H.323) participants • Enables SIP participants • IVR-enabled features • Audio Only and Video Entry Queues • COP conferences • Video+ Capabilities • Encryption capabilities

Configuration Guidelines

- IVR-enabled Video conferences and Entry Queue Access conferences require the installation of the Audio+ card in the MCU.
- Video Continuous Presence conferences are routed to the Standard Video card when the MCU includes both Video and Video+ cards. The operator can change this selection manually when setting up the conference, in the *Conference Properties - Resource Force* dialog box. See *"Optional. To modify the automatic card selection by the MCU:" on page 4-63*.
- Video Continuous Presence conferences set to Quad Views, COP conferences, or Continuous Presence with visual effects, are all routed to the Video+ card.
- Video conferences are routed to the Standard Audio card when the MCU includes both the Standard Audio and the Audio+ cards. When an IVR Service is used, the conference is run on the Audio+ card.
- Video Switching conferences run on the Standard Audio card allow up to 16 participants (12 video and 4 audio-only) to connect to the conference. The operator can increase the number of participants up to 30, by setting the audio bridge component of the standard Audio card to 1/30 in the "system.cfg". For more details, see the *MGC Manager User's Guide, Volume II, Chapter 1, "Advanced Conference Settings"*.
- Video Switching conferences run on the Audio+ card allow up to 100 participants at 128 Kbps to connect to the conference without special configuration.
- Audio Only conferences are automatically routed to the Audio+ card, to enable the IVR functionality.
- Only Audio+ 12/24, 24/48 and 48/96 cards support T1-CAS participants.
- Video conferences that run on MCUs with a Video+ card, have additional features such as Quad Views, Visual Effects, and activation of the Click&View application on the participant endpoint's screen.
- Operator conferences can run on both Standard Audio and Audio+ cards depending on the type of conference that is managed by the operator. IVR-enabled conferences use the Audio+ card while AV (Welcome/ Attended) conferences use the Standard Audio card. The Operator conference should be set according to the installed card capabilities.
- Encrypted conferences require MUX+ cards.

About Participants

Participants are people using personal endpoints or endpoints in Meeting Rooms used by many people. When defining participants you are actually defining the connection parameters of the endpoint to be used by the person participating in the conference. Participants may dial to the conference (dial-in) or the conferencing system may dial to the participant (dial-out).

Participant Roles

Conference participants can have different roles: a standard participant, a chairperson, lecturer or an operator. Each role is represented by an appropriate icon.

- **Standard participant** - takes part in the conference, performing operations via the telephone or via the endpoint's remote control using touch-tone signals (DTMF codes). Participants can control their broadcasting and listening volume, mute or unmute their line, request operator's assistance, invite new participants to the conference, vote and ask questions.
- **Chairperson** - takes part in the conference but is also the meeting's organizer. The chairperson can control the conference using a Web browser or via DTMF codes. Chairpersons perform all the functions of the standard participant but have additional privileges. They can start a voting session, designate himself/herself as the conference speaker while muting all other participants and place the conference on hold and more.
- **Lecturer -** A standard participant or chairperson who is designated as the conference lecturer and is seen by all conference participants in full screen.
- **Operator** - can perform all the standard and chairperson's functions and additional operator-specific functions. Using the MGC Manager or the MGC WebCommander applications, the operator can control and monitor all On Going Conferences simultaneously, perform general MCU configuration and maintenance operations. The operator does not have to participate in a conference in order to control it, however, in attended conferencing the operator can participate in the conference to manage it. During On Going Conferences, the operator can move participants between conferences, assist participants who need help and terminate the conference before its scheduled time.

Participant Connection Types

Conference participants can call the conference (dial-in) or be called by the system (dial-out) at the conference start or during the On Going Conference. The method which participants use to connect to the conference influences the definition of the conference and the required caller information.

A conference can include only dial-in participants, only dial-out participants or both dial-in and dial-out participants.

Dial-out Participant

In a conference that includes only dial-out participants, each participant can be called individually by the conferencing system and connected directly to the conference, usually without interaction with the IVR system. The connection process can be initiated manually or automatically. In the manual mode, the operator or meeting organizer instructs the conferencing system to call the participant. In the automatic mode the system calls all the participants one after the other. Dial-out participants must be defined (mainly their name and telephone number) in the MGC Manager or WebCommander by the meeting organizer/operator.

Dial-in Participant

In a conference that includes dial-in participants, the participants can be defined in advance and they are identified by their Calling Line Identifier (CLI) number (ISDN) or IP address/alias (IP) once they connect to the conference. The conference can include “anonymous”, undefined participants. These participants were not defined by the operator/meeting organizer prior to the conference start and they connect to the conference by dialing the conference dial-in number and have entered the appropriate password (if one was assigned to the conference). Conferences that include “undefined” dial-in participants must be defined as Meet Me Per Conference, Meeting Room or a standard conference that is accessed via an Entry Queue.

Defining On Going Conferences

You can reserve a conference in advance (for details, see Chapter 9) or request to start a conference as soon as possible. In addition to the Standard conference definition that is described here, the following conference types may be defined:

- Meet Me per Conferences. For details, see *Chapter 7*
- Meeting Rooms. For details, see *Chapter 7*.
- Entry Queues. For details, see *Chapter 8*.
- Operator conferences. For details, see *Chapter 8*.

Preparatory Tasks

Before you start setting up a new conference, it is recommended to check the dial-in numbers defined in the ISDN Network Service, the IP Service Prefix defined in the IP Network Service (for H.323 dial in) and the participants' endpoint connection parameters (dial number and video capabilities).

Defining a New Audio Only Conference

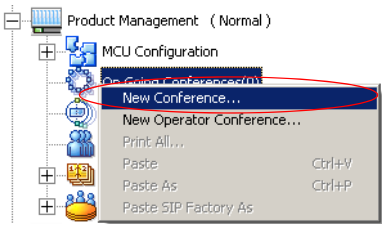
For the description of the Audio Only conferences definition, see the *MGC Manager User's Guide, VoicePlus Edition, Chapter 2, "Defining Standard Audio Only Conferences and Reservations"*.

If the *Audio Look and Feel* mode is set for the system, the conference properties and defaults are automatically set to Audio Only and the video parameters are hidden. The *Audio Look and Feel* mode is set in the MGC Manager *Options* menu. For more details, refer to the *MGC Administrator's Guide, Chapter 5*.

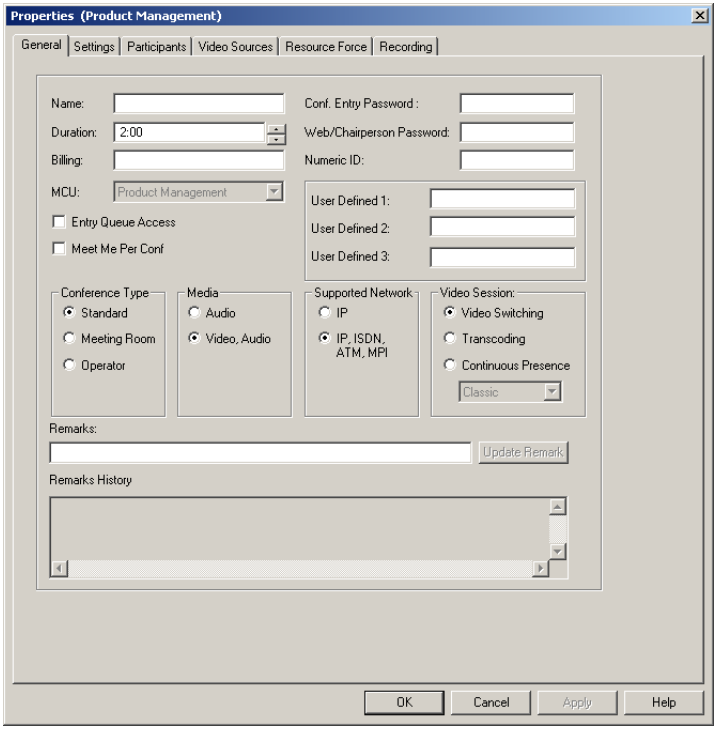
Defining a New On Going Video Conference

To define a new On Going video conference:

1. Connect to an MCU and expand its options tree. For details, see Chapter 3, “MGC Manager Basics”.
2. Right-click the *On Going Conferences* icon, and then click **New Conference**.



The *Conference Properties - General* dialog box opens.



The conference properties are logically grouped in the following tabs:

— *General*—lets you define the basic conference parameters, such as name, duration, password and type of access. Here you also define the conference type, media, network and type of video session.

— *Settings*—lets you define the conference video options, such as COP, FECC, Encryption, cascading and more, as well as the media technical parameters, such as line rate, audio algorithms, and video options.

— *Participants*—lets you set options for participant connections, and add participants from the Participants database/templates, or define new participants.

— *Video Sources*—lets you select the preferred video display and layout when the video session is Continuous Presence (not applicable with other types of video session) and to enable the Lecture Mode (not applicable with Continuous Presence-Software).

— *Resource Force*—lets you view and select the Audio and Video resources to run the conference according to the available MCU resources. If your MCU contains both standard Audio and Audio+ cards and standard Video and/or Video+ cards, you can select the Audio card type and/or the Video card type to run the conference.

— *Recording*—lets you define recording options for the current conference.

— *Meet Me per Conference*—lets you define Meeting Rooms and Meet Me Per Conference reservation templates. Enabled only when the *Meet Me Per Conf* option is selected in the *General* properties.

To define the conference General parameters:

The options in *Properties-General* tab allow the setup of different types of conferences according to their general properties. Selections made in this dialog box affect the other On Going Conference parameters, and enable other tabs.

3. Define the following parameters:

Table 4-4: Conference Properties - General

Field/Option	Description
Name	(Mandatory) Enter a unique conference name, using up to 80 characters. **Note:** If the name is already used by another conference, Meeting Room, Entry Queue, or Reservation in the same or partially overlapping time frame, an error message is displayed, requesting you to enter a different name.
Duration	Define the duration of the conference using the format HH:MM (default 2:00, maximum 99:59). For example, to define a duration of 30 minutes, enter 0:30. For duration of 90 minutes, enter 01:30. Setting the conference duration to 99.59 will cause the conference to be extended indefinitely when the Auto Extension mechanism is enabled. For more details about the Auto Extension mechanism, see *MGC Manager User's Guide, Volume II, Chapter 1*.
Billing	Enter the conference billing code (if one is defined). The billing code can be assigned to the conference by your reservation system or it can be allocated by the conference chairperson or contact person.
MCU	Displays the name of the MCU to which you are currently connected (read-only).
Conf. Entry Password	Enter a numeric password that participants will use to access the conference. If left blank, the MCU automatically assigns a password to the conference once the conference definition is completed (provided the MCU is configured to automatically assign passwords). For more details about the MCU configuration, see the *MGC Administrator's Guide, Chapter 5, "Edit system.cfg"*. **Note:** This field is applicable only to IVR-enabled conferences which are configured to prompt for the entry password, or to conferences accessed from an Entry Queue that use passwords as the routing method.

Table 4-4: Conference Properties - General (Continued)

Field/Option	Description
Web/Chairperson Password	Enter a numeric password that participants will use to identify themselves as the conference chairperson. This password is only required in IVR-enabled conferences that are configured to prompt for the chairperson password. **Note:** In Video conferences without IVR, this password is required only for accessing the conference properties from the WebCommander application.
Numeric ID	Each conference must be assigned a unique identification number. Numeric IDs (NID) are required for routing purposes when accessing the conference from the Entry Queue (when the selected routing method is numeric ID) and for dialing to the conference from an H.323 endpoint, as part of the dialing string. NID can be assigned manually or automatically. To manually assign the NID, enter a number in the length (the number of digits) defined in the "system.cfg" file. If the Numeric ID is already in use in another Entry Queue or conference, an error message will be displayed. If you do not assign the Numeric ID, the MCU automatically assigns one when the conference is saved on the MCU. **Note:** If the MCU is configured to support only *automatic* assignment of Numeric IDs, then this field is disabled and the system automatically assigns a Numeric ID after you save the conference on the MCU.
Entry Queue Access	Select this option to force participants to access the conference via a single-dial Entry Queue by dialing the Entry Queue dial number. Once the participants are connected to the Entry Queue, they enter the destination conference Numeric ID or password (depending on the MCU configuration) to join the conference.

Table 4-4: Conference Properties - General (Continued)

Field/Option	Description
Meet Me Per Conf	Select this option to enable the *Meet Me Per Conference* tab. *Meet Me Per* conference allows “undefined” participants to connect to a conference by dialing a pre-defined dial-in number. “Undefined” participants are not defined prior to the conference start. **Note**: If *Meet Me Per Conf* is selected in addition to *Entry Queue Access* for the conference, a dial-in number is assigned to the conference, which participants can use to connect to the conference directly (not via an Entry Queue). If you do not require the direct dialing to the conference and to save dial-in numbers, select either the *Meet Me Per Conf* option or the *Entry Queue Access* option.
User Defined 1-3	The *User Defined* fields enable you to enter general information for the conference, such as the company name, the contact person name, E-mail or telephone number, or any other required information. **Note:** s • The *User Defined* fields are displayed only if the *Show User Defined Fields in Conference Parameters* option is selected in the *Database Manager -> Defaults ->User Defined Defaults.* • The titles of the *User Defined* fields can be modified in the *Database Manager -> Defaults -> User Defined Defaults* and loaded to the MGC Manager application. For details of defining the titles see the *MGC Manager User’s Guide, Volume II, Chapter 6*. For a description on how to load the user defined default titles, see *Chapter 3, “Loading the User Defined Default Set to the MGC Manager Application” on page 3-31.*

Table 4-4: Conference Properties - General (Continued)

Field/Option	Description
Conference Type	Select the type of conference you are defining: • ***Standard*** - Select this option if you are defining an On Going Conference with its required MCU resources. When this conference ends it is deleted from the MCU. • ***Meeting Room*** - Select this option to define a new Meeting Room. A Meeting Room is a passive conference that is reserved once, without resource allocation and is activated many times when the first participant dials in and joins the conference. For more details *see Chapter 7, "Meet Me per Conferences and Meeting Rooms"*. • ***Operator*** - Select this option to define an Operator conference, to enable the attended conferencing mode, and to enable the operator's assistance for Entry Queues and IVR-enabled conferences as well as Greet and Guide Video conferences. For more details *see Chapter 8, "Entry Queues, Operator Conferences, and Attended Conferencing"*.
Media	Select **Audio** to define an Audio Only conference with VoicePlus capabilities such as IVR Service, Roll Call etc. For a detailed description, refer to the *MGC Manager User's Guide, VoicePlus Edition*. Select **Video, Audio** for video conferences that can include Audio Only and video participants.
Supported Network	Select the network to be used by participants to connect to this conference. • ***IP*** - Select this option if only IP participants will connect to the conference. In addition to Classic and Quad Views, the *Software* option is enabled in the *Video Session > Continuous Presence* list. • ***IP / ISDN / ATM / MPI*** - Select this option to let participants join this conference using all types of network connections.

Table 4-4: Conference Properties - General (Continued)

Field/Option	Description
Video Session	Select the Video Session type for the conference: • ***Video Switching*** - To set a conference in which all the participants use the same line rate and video and audio parameters, by setting the communication parameters to the common capabilities. This conference type does not use the MCU video resources. The conference speaker is displayed in full screen on all endpoints. In Video Switching conferences, the highest common mechanism is enabled, allowing the system to select the best video parameters that can be supported by all the endpoints currently connected to the system, and dynamically change them when a new endpoint joins or leaves the conference. • ***Transcoding*** - To set a conference in which participants use different line rates, video, audio and data parameters, up to the maximum line rate defined for the conference, thus maintaining the best video and audio capability that each participant endpoint can achieve with the current conference settings. As in a Video Switching session, the current speaker is displayed on all screens and switching between participants is audio activated. This conference type requires MCU video resources.

Table 4-4: Conference Properties - General (Continued)

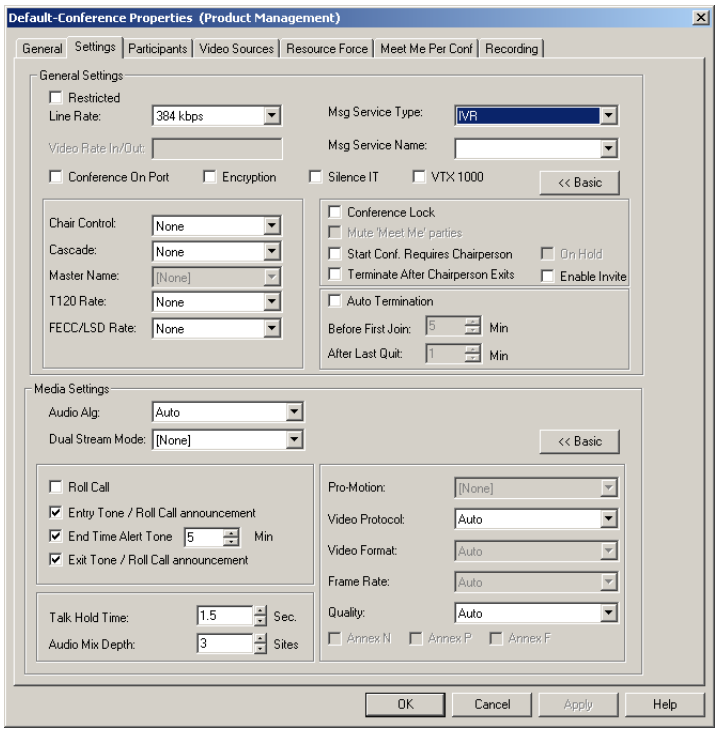
Field/Option	Description
Video Session (cont.)	• ***Continuous Presence*** - To set a conference in which several participants can be viewed simultaneously in video layout windows. In this conference type, each participant endpoint's capabilities are used, to maintain the highest possible video, audio and data quality according to the conference settings.Hence, this conference type requires MCU video resources. Once Continuous Presence is selected, the categories of video layout arrangements are available: — **Classic** - participants can be displayed in up to 9 video windows arranged in 21 video layouts that can be used with all types of Video card. — **Quad Views** - This mode should be selected when the conference includes 10 participants or more that can be arranged in three different layouts. Five additional layouts are also available for selection. This conference type uses Video+ card resources. — **Software** *(*SWCP*)* - a software solution that resembles the Continuous Presence functionality, but does not use video card resources. Offers only two video layouts: 2x1 and 2x2. Implemented in IP only conferences. Continuous Presence conferences can also be defined as Conference On Port (COP), to save video resources. For more details, see the *MGC Manager User's Guide Volume II, Chapter 1 "Advanced Conference Settings"*. For more details on Video Session options, see *"Video Session Types" on page 4-7*.
Remarks	Using up to 300 characters you can enter text such as any useful information, to be viewed by other operators or the conference chairperson (via the WebCommander application). Remarks entered at the reservation stage (conference setup) are included with conference properties and in the records that are saved to the CDR file. During an On Going conference, you can add a new entry and save it using the *Update Remark* button.

Table 4-4: Conference Properties - General (Continued)

Field/Option	Description
Remarks History	Displays all remarks that were entered and/or updated for this conference by operators and were saved to the CDR file. This field can be read during the conference but not at the reservation stage. Entries are shown in ascending order (latest entry showing at top of list).

4. Click the **Settings** tab to define the conference technical parameters.

   The *Properties - Settings* dialog box opens.



Parameters in the *Conference Properties - Settings* dialog box are grouped in two main areas: *General Settings* and *Media Settings*. By default only the *Basic* settings are displayed when you first open the dialog box. You can click the **Advanced** >> button to view and modify the additional settings. The *Advanced* options remain on display, until

closed by clicking the **<<Basic** button. In most conference definitions you do not need to modify the *Advanced* parameters because the MGC Manager uses the optimal parameters (Highest Common), based on the Video Session type, conference line rate and the endpoint's capabilities. However, if you do want to force the use of a specific video parameter, such as the H.264 video protocol, or to use various conferencing options such as FECC or COP, click the Advanced button. Advanced settings are described in detail in the *MGC Manager User's Guide, Volume II, Chapter 1, "Advanced Conference Settings"*.

All the fields in the *Settings* dialog box display the default values defined in the *MGC Database Manager - Conference Defaults* according to the conference type selected in the *Properties - General* dialog box.
For more details on the Conference Defaults definition, see the *MGC Manager User's Guide, Volume II, Chapter 6, "Defining Conference Defaults"*.

To define the conference media and additional settings:

5. Define the following parameters:

Table 4-5: Conference Properties - Settings Parameters

Option/Field	Description
Restricted	Select this option if all participants use restricted lines whose line rate for each channel is 56 Kbps instead of 64 Kbps. If only some of the participants use restricted lines, do not select this option. Instead, select the restricted option when setting the parameters of the relevant participants and set the conference video session type to *Transcoding*. **Note:** This option is relevant only to ISDN lines, therefore it is disabled for IP only conferences.
Line Rate	Select the conference transmission rate according to the type of video session you selected. The highest transmission rate in Transcoding and Continuous Presence sessions is 1920 Kbps (E1). High line rates may require more MCU resources. The H.264 video protocol is supported at line rates of up to 384 Kbps.

Table 4-5: Conference Properties - Settings Parameters (Continued)

Option/Field	Description
Line Rate (cont.)	**For a *Video Switching* conference**, select the highest line rate common to all participants. For example, if two participants can connect at a transfer rate of 384 Kbps and one participant can connect at a rate of 128 Kbps, set the line rate to 128 Kbps. In a conference with participants from mixed networks (ISDN and IP), the line rate defined for ISDN participants is also used for IP participants. **For *Transcoding and Continuous Presence* conferences,** define the maximum rate for the conference. The actual line rate for individual connection is defined at the participant level. If the participant's Line Rate is set to **Auto**, the endpoint connects to the conference using the highest line rate possible by the endpoint up to the line rate defined for the conference (in this field). In such a case, set the conference line rate to the highest transmission rate that can be used by the participants in the conference. **For *Software Continuous Presence* conferences**, the line rate is set at the conference level and represents the transmission rate from the MCU to the endpoint (combined video rate and audio rate). For more details regarding the line rate settings for Software CP conferences, see the *MGC Manager User's Guide, Volume II, Chapter 1, "Software Continuous Presence Settings"*. **For *Conference On Port* conferences**, select the estimated highest transmission rate common to all participants. In order to maintain a minimum video quality for a Conference On Port, there is a minimum threshold line rate that participants must support in order to connect with video. This minimum threshold line rate is determined according to the conference Line Rate. For more details, see *"Conference On Port (COP)" on page 4-10*.

Table 4-5: Conference Properties - Settings Parameters (Continued)

Option/Field	Description
Line Rate (cont.)	**Notes:** • A high line rate transmission is enabled with the Standard Video card version 1.43 and higher, or with the Video+ card. • The MGC unit can automatically detect the line rate of incoming ISDN/IP calls. In such a case, the conference line rate is the maximum rate for the participant connection. • The line rate of a conference with ATM participants can be either 2B, or 256 Kbps and up to 1152 Kbps, including H0 (depending on the participant's endpoint capabilities).
Video Rate In/Out	Applicable to *Software Continuous Presence* only. Displays the ratio between the incoming video rate of a single endpoint and the video rate of the outgoing stream (4 times the incoming video rate of a single endpoint). For more details, see the *MGC Manager User's Guide Volume II, Chapter 1, "Software Continuous Presence Settings".*
Message Service Type	In conferences with Message Services, participants are greeted upon their connection to the MCU and are guided to their destination conferences either by an operator (attended conferences) or by menu prompts and voice messages (unattended conferences). In addition, IVR Message Services enable participants to control their connection to the conference, and chairpersons to control the conference and perform various operations. Select the type of Message Service for the conference: • ***None*** - (default) to indicate a standard conference, without any message services. • ***Welcome (No Wait)*** - for a Greet and Guide unattended conference run on a standard Audio card. Participants are greeted by a *Welcome* video slide and audio messages and, after a predefined period, are automatically connected to the appropriate conference. For more details, see the *MGC Manager User's Guide Volume II, Chapter 4.*

Table 4-5: Conference Properties - Settings Parameters (Continued)

Option/Field	Description
Message Service Type (cont.)	• ***Attended (Wait)*** - for a Greet and Guide Attended conference run on a standard Audio card. Participants are greeted by a *Welcome* video slide and audio messages, and wait for the operator to connect them to the appropriate conference. For more details, see the *MGC Manager User's Guide, Volume II, Chapter 4.* • ***IVR*** - to create an IVR-enabled conference, in which participants are guided through their connection process by an automated voice system. For a detailed description, see the *MGC Manager User's Guide Volume II, Chapter 2.* **Note:** The G**reet and Guide** options (*Welcome (No Wait) and Attended (Wait))* should be selected only if Standard Audio cards and no Audio+ cards are installed in your MCU. If an Audio+ card is installed in your MCU, select the **IVR** option for attended and voice guided connections to the conference.
Message Service Name	If you have selected a Message Service type other than *None*, select the name of an IVR Service for an IVR-enabled conference, or the name of the AV Message Service for Welcome (No Wait) or Welcome (Wait) conference. **Note:** If left blank, the system automatically selects the default IVR or AV Message Service (depending on the attended conference type).
Conference On Port (COP)	Select this option to enable to run a video conference using only one video resource for the entire conference (instead of one video resource per participant). This option is available if *Continuous Presence* (*Classic & Quad Views*) is selected in the *Conference Properties - General* tab. For more details, see *"Conference On Port (COP)" on page 4-10*. For a COP session, select the estimated highest transfer rate that can be used by the conference participants. In this mode all conference participants must use the same video parameters.

Table 4-5: Conference Properties - Settings Parameters (Continued)

Option/Field	Description
Encryption	Select this check box to enable encryption for this conference. ISDN and IP encrypted participants require more resources than non-encrypted participants. Whether the participant's connection to a conference is encrypted or non-encrypted depends on the encryption setting of the conference or the Entry Queue as well as on the participant's own encryption setting. For more information, see the *MGC Manager User's Guide Volume II, Chapter 1, "Media Encryption".*
SilenceIT	Select this check box to enable automatic muting of noisy lines for Audio Only participants taking part in a video conference. SilenceIT must be enabled in the IVR Service to be enabled for new conferences. If you enable this option while an IVR Service you assigned to the conference is not SilenceIT-enabled, the conference definition will be rejected. See the *MGC Manager User's Guide, Volume II, Chapter 2, "Using SilenceIT"*.
VTX 1000	Select this check box to enable VTX 1000 users to connect by a phone line to unified or Audio Only conferences, with wideband, high quality audio. Undefined participants connecting directly to VTX 1000-enabled conferences are initially assigned wideband resources. If the endpoint is not identified as VTX 1000, the wideband resources are subsequently released. All defined participants in VTX 1000-enabled conferences are allocated wideband resources. **Note:** This option is enabled if the VTX 1000 option is enabled for the MCU in the system.cfg file and if the the Audio+12/24, 24/48 or 48/96 card is installed in the MCU.
Audio Alg	Select the preferred audio algorithm for the type of conference you define. This parameter represents the compression ratio. Very high compression ratio may require more resources.

Table 4-5: Conference Properties - Settings Parameters (Continued)

Option/Field	Description
Audio Alg (cont.)	The available audio algorithms are: • Auto • 8 (G.729/G.723.1) • 16 (Siren7/G.728) • 24 (Siren14/G.722.1/Siren7) • 32 (Siren14/G.722.1/Siren7) • 48 (Siren14/G.722/G.711) • 56 (G.722/G.711) • 56 (G.711) Audio Algorithm 8 (G.729/G.723.1) is the most compressed audio and 56 (G.711) is without audio compression. If set to **Auto**, the system tries to connect the participants using the best possible audio algorithm for the conference. **Notes:** • 8 (G.729/G.723.1) is available only for *IP Only* conferences and the Audio+12/24, 24/48 or 48/96 card is installed in the MCU. • In *Video Switching* conferences, all participants must use the same audio algorithm as this influences the video bandwidth. Participants with endpoints that do not support the algorithm selected for the conference, are connected as Secondary (Audio only). • If the conference line rate is set to 2B or 128 Kbps, to achieve the best audio and video quality, select the most compressed audio algorithm for all participants in the following order: G.728, G.722, G.711. When Siren7 (16, 24 or 32 bit) is available, select the audio algorithm in the following order: Siren 7 (16), G.728, G.722 and G.711. Siren7 16 bit and G.728 algorithms are interchangeable, and a participant using either one is fully connected when one of them is selected as the audio algorithm.

Table 4-5: Conference Properties - Settings Parameters (Continued)

Option/Field	Description
Audio Alg (cont.)	• If the conference line rate is higher than 128 Kbps, to achieve the best audio and video quality, select the audio algorithm in the following order: G.722.1 (32), G.722.1 (24), G.722 / G711. When Siren7 (16, 24 or 32 bit) is available, select the audio algorithm in the following order: G.722.1 (32), Siren7 (32), G.722.1 (24), Siren7 (24), G.722, Siren7 (16), G.711. • Siren 14 is available only when it is enabled in the system configuration file. It should be used with conference rates higher than 128 Kbps, only when all endpoints support this algorithm. In *Transcoding* or *Continuous Presence* conferences, you can select any of the available audio algorithms. If set to **Auto**, the system tries to connect the participants using the best possible audio algorithm according to the line rate set for the conference.

Dual Stream Mode	In this mode, the endpoint sends two video streams: Video and data. *The* Video is based on the principle, "I see you and you see me", while data implies "we both see the same content". The video streams are handled differently by the receiving endpoint. The different streams may be shown on separate screens during the video session.
	• ***None*** - The Dual Stream mode is unavailable. In such a case, the *Video Protocol* parameter is set to **Auto**.
	• ***H.239/P+C*** - Enables sending two alternating video streams, People and Content for most Polycom endpoints. P+C is the Polycom proprietary protocol while H.239 is the industry standard. Select the bitrate for the Contents stream according to the required Content quality:
	  • **Graphics** - for standard graphics
	  • **Hi-res Graphics** - for high quality display or highly detailed graphics
	  • **Live Video** - for video clips or live video display

Table 4-5: Conference Properties - Settings Parameters (Continued)

Option/Field	Description
Dual Stream Mode (cont.)	• ***People and Content V0*** - Polycom proprietary technology, mainly intended for PictureTel and other older endpoints. For this mode, Annex N, Annex P and Annex F are selected by default. Available only when the conference is set to Video Switching. • ***Visual Concert PC and FX*** - Available with Polycom Viewstation or Viewstation FX endpoints and only when the conference is set to Video Switching. • ***DuoVideo*** - Available with Tandberg endpoints in which one conference is set as the video conference and the other as the presentation conference. Select this option when defining presentation conferences. This option is available only when the conference is set to Video Switching. For a detailed description of Dual Stream options, see the *MGC Manager User's Guide, Volume II, Chapter 1, "Dual Stream Modes".*

Defining Advanced Conference Settings

6. In the *General Settings* pane, click the **Advanced** >> button.
7. Define the following parameters:

Table 4-6: Conference Properties Advanced Settings - General

Option/Field	Description
Chair Control	Select **Auto** to enable one endpoint (chairperson's) to control the conference and other conference participants. Select **None** to disable this option. This option is enabled when the *Cascade* field is set to *None*. For more details, see the *MGC Manager User's Guide, Volume II, Chapter 5.*

Table 4-6: Conference Properties Advanced Settings - General (Continued)

Option/Field	Description
Cascade	Cascading enables you to run one large conference that is made up of one **Master** and one or several **Slave** conferences (these conferences are not connected directly to each other) run on different MCUs or on the same MCU. For more details, see the *MGC Manager User's Guide, Volume II, Chapter 5.*
Master Name	This option is enabled when the *Cascade* option is set to *Slave*. Select the name of the participant that acts as the link to the *Master* conference. This option can be selected only when the link is defined in the Participants tab. For more details, see the *MGC Manager User's Guide, Volume II, Chapter 5.*
T120 Rate	Select the T.120 data transfer rate, if the Data card is installed in the MCU and you want to include data sharing in T.120 format in the conference. The lower the rate the slower the transfer rate and the response time. The same T.120 rate must be used by all the conference participants, therefore select the highest rate common to all participants. Select **None** to disable the T.120 mode. **Note:** • When the conference line rate is 2B or 128 Kbps, selecting a high T.120 rate results in a loss of video quality.
FECC/LSD Rate	LSD channel is used to transfer the Far End Camera Control (FECC) commands, enabling participants to control other video cameras from their endpoints. For more details, see the *MGC Manager User's Guide Volume II, Chapter 1.* **Note:** • In Video Switching conferences, if an endpoint does not support FECC and cannot open the LSD channel, the participant connects as Audio Only (Secondary).

Table 4-6: Conference Properties Advanced Settings - General (Continued)

Option/Field	Description
Conference Lock	Select this option to lock the conference to undefined (“Meet Me”) dial-in participants and prevent them from joining the conference once it has started. Clear this check box to unlock a locked conference. A locked conference can be unlocked while it is in an On Going state. **Note:** This option is enabled only if the Audio+ card is installed in the MCU and for Meeting Rooms and Standard conferences set as Meet-Me-Per-Conference or Entry Queue Access.
Mute “Meet Me” Parties	Select this option to automatically mute all undefined (“Meet Me “) dial-in participants once they are connected to the conference. The participants can then be individually unmuted by the operator or the conference chairperson. **Note:** This option is enabled only if the Audio+ card is installed in the MCU and for Audio Only Meeting Rooms and Standard conferences set as Meet-Me-Per-Conference or Entry Queue Access.
Start Conf. Requires Chairperson	Select this option to allow the conference to start only when the participant defined as a chairperson connects to the conference. Participants who connect to the conference before the chairperson are placed on hold and hear background music (and see a *Welcome* slide when available). Once the conference is activated, the participants are automatically connected to the conference. When the check box is cleared, the conference starts at its predefined time or when the first participant connects to it (Meeting Rooms). **Note:** This option is enabled only when an IVR Service is assigned to the conference and the Audio+ card is installed in the MCU.

Table 4-6: Conference Properties Advanced Settings - General (Continued)

Option/Field	Description
Terminate Conference after Chairperson Exits	Select this option to automatically terminate the conference once the conference chairperson disconnects from the conference. When the check box is cleared, the conference automatically ends at the predefined end time, or when all the participants have disconnected from the conference (if *Auto Terminate* is selected). **Note:** This option is enabled only when an IVR Service is assigned to the conference and the Audio+ card is installed in the MCU.
On Hold	Select this option to place the conference on hold. While in On Hold state, all the participants hear background music (if an external device is attached to the Audio+ IO card). Clear this check box to reinstate the conference. **Note:** A conference on hold can be released and placed on hold during an On Going Conference. This option is enabled only for Audio Only conferences and only when an IVR Service is assigned to the conference and the Audio+ card is installed in the MCU.
Enable Invite	Select this option to enable the *Invite* functionality in an IVR-enabled conference. When selected, participants in the conference can invite new participants during the conference. **Note:** This option can only be activated during the conference definition stage. It is valid only for conferences with an IVR service in which the Enable Invite messages and prompts are enabled. For more information on Audio Invite, refer to the *MGC Manager User's Guide, VoicePlus Edition. For more details on Video Invite, see the MGC Manager User's Guide, Volume II, Chapter 1.*

Table 4-6: Conference Properties Advanced Settings - General (Continued)

Option/Field	Description
Auto Termination	Select this option to automatically end the conference by the MCU and define the termination condition and the time period (in minutes) before the conference is considered idle: • ***Before First Join*** — No participant has connected to an On Going Conference for *n* minutes after it started. Default is 5 minutes. • ***After Last Quit*** — All the participants have disconnected from the conference and the conference is idle (empty) for a predefined time period. Default is 1 minute. Since empty conferences still use resources that were reserved for them, this option is useful to save resources and billing costs.

Defining Advanced Media Settings

8. TIn the *Media Settings* area of the *Conference Properties - Settings* tab, click the **Advanced** >> button.

Table 4-7: Conference Properties Advanced Settings - Media

Field/Option	Description
Roll Call	Click this option to enable Roll Call for the conference. Roll Call records the participant's name and plays it back when the participant enters and leaves a conference. When the chairperson requests a roll call, the recorded names of all conference participants are played back to the conference. If Roll Call is disabled for the conference but enabled in an assigned IVR Service, the particpants names are recorded as they enter the conference, and can be played during the conference if enabled.

Table 4-7: Conference Properties Advanced Settings - Media (Continued)

Field/Option	Description
Roll Call (cont.)	**Note:** • This option is available only for IVR-enabled conferences, and only when the Roll Call option is selected in the definition of the IVR Service assigned to the conference. It requires the installation of the Audio+ card in the MCU. • If *Entry Tone* and *Exit Tone* are enabled for the conference, the participant name is played back to the conference when the participant enters or leaves the conference. • If the *Roll Call* option is disabled for the conference but enabled in the assigned IVR Service, Roll Call cannot be requested during the On Going Conference. However, the participant name is recorded as the Roll Call option can be enabled during the On Going Conference.
Entry Tone/Roll Call Announcement	Select this option to enable an audio tone to be played when a participant (audio or video) connects to the conference. This tone is heard by all the participants currently connected to the conference (but not by the connecting participant). The tone is embedded in the MCU software. **Note**: If Roll Call is enabled for the conference, the Entry Tone is replaced by a playback of the recorded participant name.
End Time Alert Tone	Select this option to enable the *End of Conference* reminder tone to be played once, to all the connected participants, *n* minutes before the end of the conference. This tone is unique and is embedded in the MCU's software. **Note:** If the automatic extension of the conference is enabled for the MCU in the "confer.cfg" file, selecting this option also enables the automatic extension of the conference duration for this conference. For more details see the *MGC Administrator's Guide, Chapter 5, "MCU Utilities".*

Table 4-7: Conference Properties Advanced Settings - Media (Continued)

Field/Option	Description
Exit Tone/Roll Call Announcement	Select this option to enable an *Exit Tone*, to be heard by all connected participants when a participant leaves the conference. This tone is unique and is embedded in the MCU's software. **Note**: If Roll Call is enabled for the conference, the Entry Tone is replaced by a playback of the recorded participant name.
Talk Hold Time	Indicate the minimum period, in seconds, that a participant has to speak to become the main speaker. During this period, no other participant is allowed to become the main speaker. This parameter is designed to prevent participants from becoming the main speakers when coughing/ laughing or to prevent fast and frequent changes of the main speakers.
Audio Mix Depth	Indicate how many of the loudest voices speaking at the same time are heard. The value 3 indicates that the three loudest participants speaking at the same time are heard. The maximum number of participants that can be mixed is 5.
Pro-Motion (Interlaced Video Mode)	This encoding mechanism improves the video quality in Video Switching conferences, that are set to NTSC or to PAL resolution. Select one of the available options: • ***Auto*** • ***PAL*** (50 fields) • ***NTSC*** (60 fields) • ***None*** (default) **Note:** • Select **Auto** to enable the Highest Common mechanism. The Highest Common mechanism is used when an endpoint using a Pro-Motion/ NTSC format enters a conference in which all endpoints are set to Pro-Motion/PAL Interlaced Video, or vice versa.

Table 4-7: Conference Properties Advanced Settings - Media (Continued)

Field/Option	Description
Pro-Motion (cont.))	• When a conference is set to **PAL** or **NTSC**, then the endpoints sending unsupported Pro-Motion video (for example, NTSC instead of PAL or vice versa) or that do not support Pro-Motion resolution, will connect as Secondary (audio only).
Video Protocol	The *Video Protocol* parameter determines the video compression standard used by the endpoints. The Video Protocol together with the Video Format, Frame Rate and ProMotion determine the overall video quality of the conference. In Continuous Presence conferences, the system selects the best video protocol for the endpoint according to its capabilities. In Video Switching conferences, select **Auto** to let the system select the appropriate compression algorithm and enables its dynamic adjustment by the Highest Common mechanism. Selecting one of the available protocols forces the endpoints to use only this protocol (disabling the Highest Common mechanism). Hence, endpoints that do not support the selected protocol will connect as Secondary (Audio Only). Select one of the available protocols: • ***Auto*** - this option lets the system automatically select the compression algorithm and enables the Highest Common mechanism in Video Switching conferences. This setting overrides the *Video Protocol* settings in the *Participants Properties - Advanced* dialog box. • ***H261*** - the video compression algorithm mandatory to all endpoints. • ***H263*** - a video compression algorithm that provides a better video quality than H.261. This standard is not supported by all endpoints.

Table 4-7: Conference Properties Advanced Settings - Media (Continued)

Field/Option	Description
Video Protocol (cont.)	• ***H.264*** - a video compression standard that improves video quality at a line rate lower than 384 Kbps. When H.239/P+C option is selected, H.264 is supported in the People channel in the same way as in a standard VSW conference and the Content channel only uses H.263. • ***H264**** - a Polycom proprietary version of the H.264 standard. H.264* is supported by Polycom's iPower endpoint. **Note:** The Highest Common mechanism supports only H.263 with 30 frames per second in CIF format. All other H.263 capabilities are disabled.
Video Format	This parameter specifies the resolution and is enabled only in Video Switching mode and when the video protocol is set to H.261 or H.263. When forcing the conference resolution by selecting CIF or QCIF, if a participant's endpoint does not support this format, the participant is connected as Secondary (audio only). In all other instances, and in Continuous Presence conferences, this parameters is set to **Auto***,* letting the system select the best resolution for the conference according to the endpoints capabilities. For H.261, the following options are available: • ***QCIF*** (Quarter Common Intermediate Format) - Resolution: 144 lines/176 pixels per line (one-fourth the resolution of CIF). • ***CIF*** - A video format that supports both NTSC and PAL signals. Resolution: 288 lines/352 pixels per line. Data rate up to 30 frames per second. For the H.263 protocol, you can select additional options. These options are important for displaying content when selecting the H.239/*People+Content* Dual Stream mode. Typically, the *People* resolution is CIF of up to 30 fps, while the *Content* resolution is VGA, SVGA, XGA or NTSC.

Table 4-7: Conference Properties Advanced Settings - Media (Continued)

Field/Option	Description

Video Format (cont.)	The following resolutions are available:
	• ***4CIF*** - Resolution: 576 pixels per line. Data rate up to 30 frames per second. 4CIF is enabled in the system.cfg file and requires the installation of the Video+ card in the MCU.
	Available in Video Switching conferences when the following conditions are met:
	  • The endpoint can receive 4CIF.
	  • The conference line rate is set to 512 Kbps or higher. The minimum line rate for 4CIF selection is defined in the system.cfg file.
	  • The appropriate layout is selected for the conference: layout is 1x1 (full screen and the video input stream is 4CIF), 2x2 or 3x3.
	• ***VGA*** - Resolution: 640 x 480 pixels
	• ***SVGA*** - Resolution: 800 x 600 pixels
	• ***XGA*** - Resolution: 1024 x 768 pixels
	• ***NTSC*** - Resolution: 525 lines per frame, up to 16 million colors.
	Note: When a video format is selected, its frame rate is displayed and, for H.263 formats, the annexes are enabled.

Frame Rate	This parameter defines the number of frames per second and is enabled only in the *Video Switching* mode and when the video protocol is NOT set to Auto. A higher frame rate ensures better video quality on the endpoint's screen. *Auto* is the only setting when *Video Format* is set to *Auto.* If required, select: • ***7.5; 10; 15; 30 pic/sec*** - the number of frames per second that determines the video quality. • ***Auto*** - to enable the automatic selection of the highest frame rate common to all endpoints currently connected to the conference.

Table 4-7: Conference Properties Advanced Settings - Media (Continued)

Field/Option	Description
Quality	When 4CIF is enabled for MCU (in the configuration file), you can define the video quality for the 4CIF transmission. Select the appropriate option according to the type of video display: • ***Auto*** - to allow the system to automatically select the optimal 4CIF video quality per endpoint, based on the endpoint's capability. • ***Motion*** - to optimize the video display for motion, for example when displaying a sporting event or when showing people or objects in movement. • ***Sharpness*** - to optimize the video display for details, for example when displaying still objects, or video conference presenters or lecturers. **Note:** Quality options are enabled only for CP *Classic and Quad Views* conferences set to H.263.
Annexes	In Video Switching conferences set to the H.263 protocol, Annexes can be activated to improve specific aspects of video display quality. When the Video Format is set to ***Auto***, the system selects the appropriate annexes according to the endpoint's capabilities. Annexes are required for the *Dual Stream* mode, but can also be selected independently. You can select an the following annexes: • ***Annex F*** - *Advanced Prediction Mode.* It enables the transmitting encoder to use four motion vectors for every macro block (one motion vector per block). A macro block is a piece of the picture that contains four blocks. Without this annex, the transmitting encoder can only choose one motion vector for optimal prediction of the macro block.

Table 4-7: Conference Properties Advanced Settings - Media (Continued)

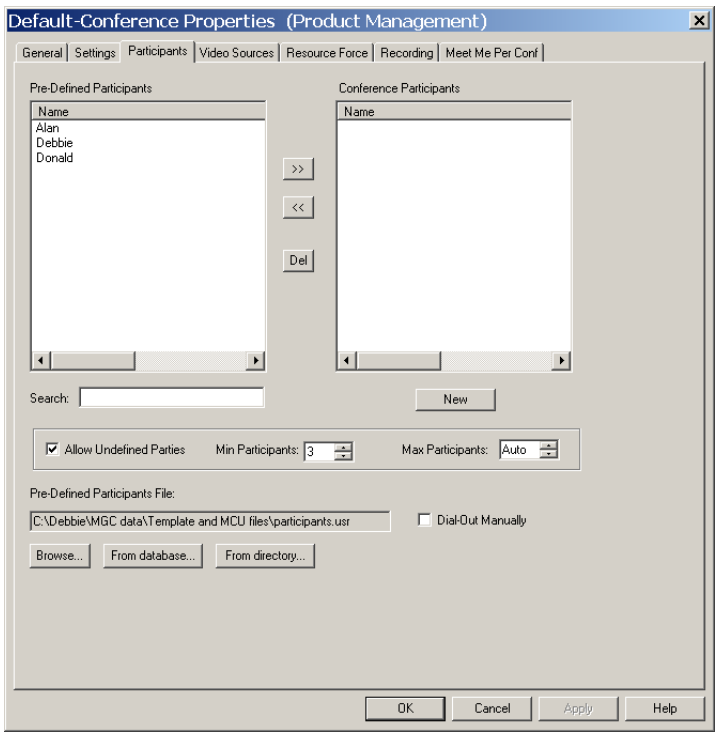
Field/Option	Description
Annexes (cont.)	• ***Annex N*** *- Reference Picture Selection Mode.* It enables the conference to recover efficiently after transmission errors have occurred in the macro blocks, and were reported via a relevant message to the speaker encoder. • ***Annex P*** *- Reference Picture Resampling.* It enables the transmitting encoder to apply a resampling process to the previous decoded reference picture in order to generate a warped picture, for use in predicting the current picture. The main purpose of this annex is to support the relationship of the current picture to a previous picture, which had a different source format, such as CIF, QCIF or 4CIF.

To add participants to the conference:

You can add participants to the conference either by selecting the participants from the Participant database or a Participant Template file, or by defining them directly during the On Going Conference.

9. Click the **Participants** tab to add participants to the On Going Conference.

The *Conference Properties - Participants* dialog box opens.



10. Add participants to the conference using the following options:

Table 4-8: Conference Properties - Participants Options

Field/Option	Description
Pre-Defined Participants	Lists the names of participants defined in the Participant database, User template file or in the LDAP directory, depending on the selected *Predefined Participant File*. The list is empty if no participant source file was selected, or if the file is empty.
Conference Participants	Lists the names of participants who were added to the conference.

Table 4-8: Conference Properties - Participants Options (Continued)

Field/Option	Description
 Add Participant	To add a participant to the conference from the selected participant's list, in the *Pre-Defined Participants* list, click the name of the participant, and then click the **>>** button. The name of the participant is added to the *Conference Participants* list, **Note:** You can select several names at a time.
 Remove Participant	To remove a participant from the conference, in the *Conference Participants* list, click the name of the participant to remove and then click the **<<** button. The participant's name is removed from the *Conference Participants* list but remains in the *Pre-Defined Participants* list. **Note:** You can select several names at a time.
 Delete Participant	Removes participants from the conference or from the *Pre-defined Participants* list. **To remove a participant from the conference only (same as Remove):** In the *Conference Participants* list, click the name of the participant and then click the **Del** button. Confirm the deletion. **To delete a participant from the *Pre-defined Participants File*:** In the *Pre-defined Participants* list, click the name of the participant and then click the **Del** button. After confirmation, the participant's name is removed from the *Pre-defined Participant File* list, and from the selected Participant Template file or Database Group. **Note:** You can select several names at a time.
Search	Use this option to search for a name when the source list is very long. Those participants whose names match the character string that you specify in this text box, are displayed in the *Pre-Defined Participants* list.

Table 4-8: Conference Properties - Participants Options (Continued)

Field/Option	Description
New	Click this button to define a new participant during conference definition. The participant's definition can be saved in the database or in the Participant Template file that appears in the *Pre-Defined Participants file* box. For more details on defining new participants, see *"Defining Participant Properties" on page 4-85*.
Allow Undefined Parties	Select this check box to allow undefined dial-in participants to connect to the conference without prior definition of participant properties. In such a case, participants connect to the conference until the number of participants exceeds the conference limit (as set in the *Max Participants* parameter), or the MCU configuration limit, or until the MCU resources are used up. **Note:** This option is automatically selected for the *Meet Me per Conf* and *Meeting Room* type of conference, or for conferences accessed from an Entry Queue.
Min Participants	Define the total number of participants for which the system reserves resources. This number should include the number of defined and undefined participants. For example, enter **5** if the conference includes two defined participants and you want the system to reserve resources for three additional undefined participants. If you enter **0**, no resources will be reserved for the conference. However, participants will be able to connect to the conference if resources are available. **Note:** The number of participants who can connect to the conference is limited by *Max Participants* limit - if defined, or by the maximum number of participants per conference supported by the MCU.

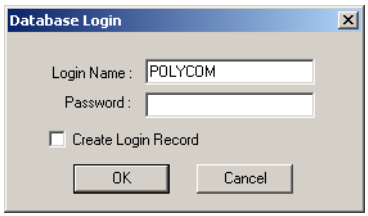
Table 4-8: Conference Properties - Participants Options (Continued)

Field/Option	Description
Max Participants	Define the total number of participants who can connect to the conference at one time, taking into account both the defined and undefined participants. This option saves resources for other conferences. When set to *Auto*, the maximum number of participants is determined by the maximum number of participants in a conference supported by the MCU, or by the availability of the MCU resources.
Pre-Defined Participants File	Displays the full path and file name of the selected database or Participant Template file from which the *Pre-Defined Participants* list is read. When the On Going Conference is defined, the system automatically lists the Participant templates in the last used list/file. • To select participants from the database, click the **From Database** button. For a detailed description of the participants from the database options, see "To add participants from the database:" on page 4-52. • To select a participants from a Participant Template file, click the **Browse** button. • To list participants defined in an LDAP compatible directory, click the **Directory** button.
Dial-Out Manually	Select this option to designate an operator-controlled dial-out conference connection. If *Dial-Out Manually* is checked, the operator must connect each of the dial-out participants. The participants remain in standby state until they are connected to the conference by the operator.

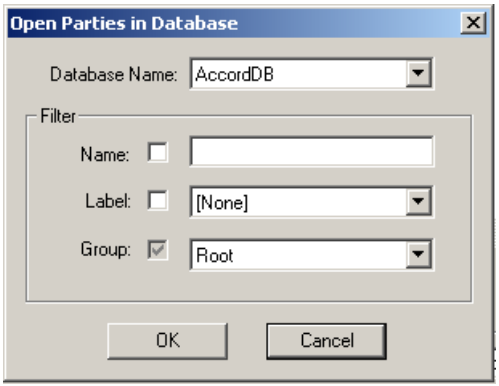
11. Use one of the following methods to add participants to the conference:
    — Add participants from the database
    — Add participants from the Participant Template file
    — Define new participants

To add participants from the database:

a. Click the **From database...** button to display the list of participants stored in the database in the *Pre-Defined Participants*.
If you are not logged into the database, the *Database Login* dialog box opens.



b. Enter your *Login Name* and *Password* and click **OK**.
The *Open Parties in Database* dialog box opens.



c. If more than one database is configured in your system, select the appropriate database from the *Database Name* list.

d. Filter the list of participants by clicking the *Name* and/or *Label* check boxes, entering the appropriate character string in the *Name* field and/or selecting the appropriate label from the drop-down list.

The *Group* option is enabled by default, displaying the highest Group in the Groups hierarchy to which the logged-in user has access. You may select another group from the Groups hierarchy list. Only groups to which you have access, are listed in the *Groups* list.

e. Click **OK**. The list of all the participants in the filtered category is displayed in the *Pre-Defined Participants* list, and the name of the participant's Group is displayed in the *Pre-Defined Participants File* You can now add names from this list to the Conference Participants

f. In the *Pre-defined Participants* list, select the participants to add to the conference and click the **Add** >> button.

To add participants from the user template file:

a. Click the **Browse** button to list the files stored on your computer. The *Open* dialog box opens letting you select the Participant Template file (.usr).

b. Using standard windows conventions, select the Participant Template file and click **Open.**
The participants in the Participant Template file are listed in the *Pre-defined Participants* list.

c. In the *Pre-defined Participants* list, select the participants to add to the conference and click the **Add** >> button.

If you are defining a conference that allows undefined parties, that is with dial-in participants who have not been defined before the conference start ("undefined" participants), for example an Entry Queue conference or Meet Me Per Conference, the Allow Undefined Participants option is selected by default in this dialog box.

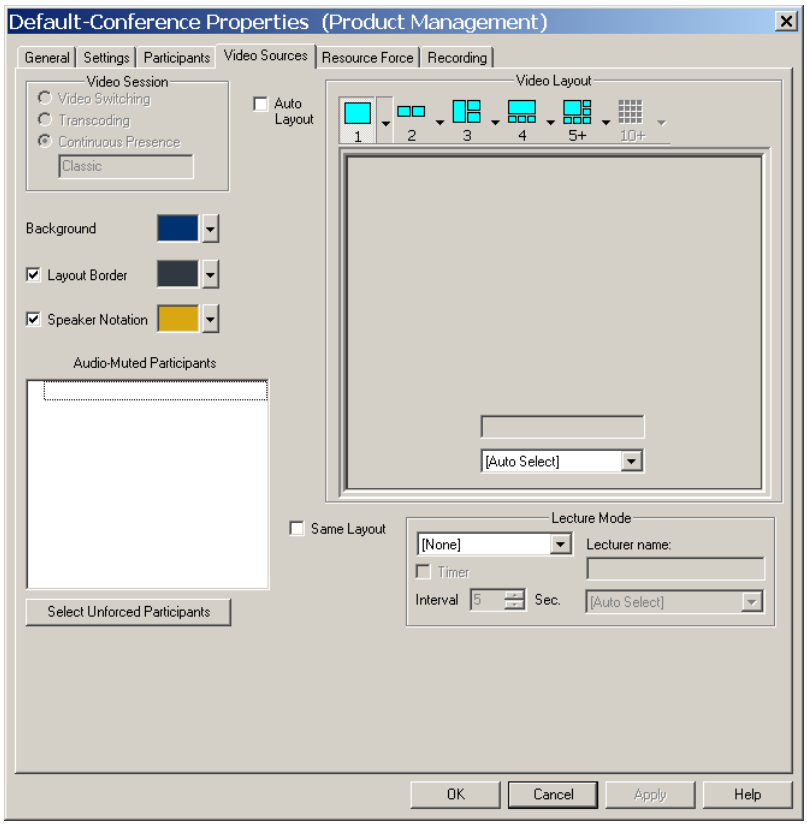
To add participants to the conference by defining new participants:

- Click the **New** button to define a new participant.
The *Participant Properties - Identification* dialog box opens.

  Defining participant properties is described in detail in *"Defining Participant Properties" on page 4-85*.

To define the Video Sources settings:

12. Click the **Video Sources** tab to select the Video Layout and add visual queues to the video display of the conference.
    The *Conference Properties - Video Sources* dialog box opens.



Video Sources comprise these groups of parameters:

— **Video Session** is a read-only area which indicates which video session type and Continuous Presence mode you selected in the *Conference Properties - General* dialog box.

— **Visual Effects** determine the look of the layout windows. Using these options you can modify the colors of the window background, borders and speaker indication. These effects are applicable only to Continuous Presence conferences, and only if a Video+ card is installed in the MCU.

— **Audio Muted Participants** -The *Unforced Participant* and *Audio-Muted Participant* options are active only during the On Going Conference, see "Muting Audio for a Conference" on page 6-52.

— **Video Layout** determines the number and the arrangement of video windows displayed on the endpoint screens and if required, select the participants to be displayed in the layout windows (video forcing). Video layout selection is applicable only to *Continuous Presence* conferences.

— **Lecture Mode** enables you to set the conference to one of the lecturing modes. For a detailed description of all Lecture/ Presentation options, see *Chapter 10, "Lecture and Presentation Modes"*.

- The *Video Sources* dialog box is hidden when defining an Audio Only conference or when the MGC Manager is configured to *Audio Look & Feel* mode.

13. Optional. Select the **Same Layout** check box to impose identical video layout settings to all participants. In Video Switching and Transcoding conferences, select this option if you want the speaker to view him/ herself instead of the previous speaker.

    This option can only be selected during the conference definition stage but not when the conference is running.

14. For Continuous Presence conferences, select the video layout by either clicking the **Auto Layout** check box to let the system automatically select the video layout according to the number of participants connected to the conference or select the *Video Layout*:

    a. Determine the number of windows to appear on the screen by clicking the arrow next to the numbered layout icon.
    A pop up menu opens displaying the available layouts for the selected number of windows according to the selected Continuous Presence mode.

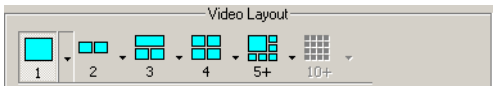
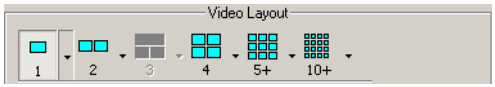
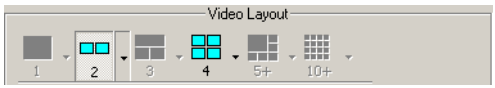
    Classic video sessions can have up to nine windows. If there are 10 or more participants, voice activated switching occurs.

    Quad Views video sessions can have up to 16 windows. If the conference includes more than 16 participants, voice activated switching occurs.

Software Continuous Presence has only two layout options: two and four video windows.

Table 4-9 lists the layouts available for each type of Continuous Presence video session.

Table 4-9: Conference Properties - Video Sources - CP Layout Menus

CP Video View	Video Layout Menu
Classic	
Quad Views	
Software (IP only conferences)	

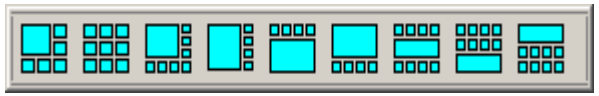
b. In the *Video Layout* pop-up menu, click the thumbnail of the desired layout.
The selected layout appears in the *Video Layout* pane.

Table 4-10 lists the available layouts for the selected number of windows in each Continuous Presence mode.

Table 4-10: Video Windows Layout Options

Number of Video Windows	Available Layouts
1	Classic mode Quad Views mode

Table 4-10: Video Windows Layout Options (Continued)

Number of Video Windows	Available Layouts
2	Classic mode Quad Views mode Software mode
3	Classic mode
4	Classic mode Quad Views mode Software mode
5+	 Classic mode Quad Views mode
10+	Quad Views mode

Auto Layout

When **Auto Layout is** selected, the conference layout automatically changes when a new video participant connects or disconnects to reflect the new number of video participants. Audio Only participants do not affect the selected layout.

The *Auto Layout* option can be disabled for the MCU by adding the appropriate flag to the "system.cfg" file. For more details, see the *MGC Administrator's Guide, Chapter 5*.

Table 4-1 describes the video layouts that are used when the conference is set to *Auto Layout* in Classic or Quad View modes.

Table 4-1: Default Layouts for CP Classic and Quad Views

Number of Video Participants	Auto Layout for Classic CP	Auto Layout for Quad Mode CP
2	1x1	1x1
3	1x2	1x2
4	2x2	2x2
5	2x2	2x2
6	1+5	2x2
7	1+5	2+8
8	1+7	2+8
9	1+7	2+8

Table 4-1: Default Layouts for CP Classic and Quad Views (Continued)

Number of Video Participants	Auto Layout for Classic CP	Auto Layout for Quad Mode CP
10	1+7	2+8
11	1+7	2+8
12+	1+7	4x4

- Software Continuous Presence conferences cannot be set to *Auto Layout*.
- The Auto Layout feature can be used with the *Lecture Mode* (for the lecturer display), but cannot be enabled with *Lecture Show*.
- Auto Layout can be used with Same Layout and Conference On Port (COP). In this mode, the system selects the layout as if one additional participant was added to the conference to show the speaker. For example, in a standard CP conference with five participants the system shows only four windows in the layout and the speaker cannot view himself. But when Auto Layout is used in Same Layout or COP mode, the system shows a 5-window layout for all five participants including the speaker.

15. Optional. To force participants to a video layout window, select the participant to be viewed by all the conference participants for a specific layout window. You can force participants to a few of the Layout windows, while in the other layout windows voice activated switching is performed.

- Video forcing during conference definition is available only if participants were added to the conference (in the Participants tab).
- When the *Same Layout* option is selected, forcing is enabled only at the conference level. *Lecture Mode* and *Click&View* are disabled. In this mode, self view may be implemented.
- In screens with an asymmetric window layout (for example 5+1, 8+1), a participant cannot be forced to the large window and to the small window simultaneously.
- Video Forcing can also be performed during the On Going Conference. See Chapter 6, "Video Forcing" on page 6-37.

To set the video layout visual effects:

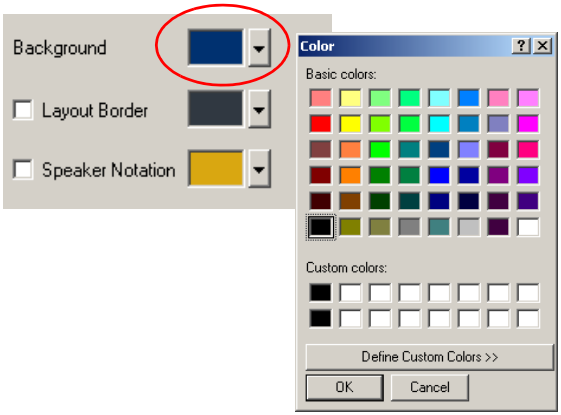
If the Continuous Presence conference is handled by a Video+ card, you can add visual effects, such as borders and colors, to the video layouts display on the endpoints. You can also modify the visual effects when the conference is running. The following modification options are available:

- **Background Color** - the color displayed when a video window is empty, for example when the video layout contains more windows than connected participants.
- **Layout Border** - you can add a frame around video layout windows displayed on the participant's endpoint. The thickness of the border and its 3-D effect are fixed, but the color can be changed.
- **Speaker Notation** - you can change the color of the border around the window of the speaker to highlight it on the endpoint display.

The visual effects are illustrated in the Polycom ViaVideo window.

Background color

16. Click the arrow next to the *Background* color box. The *Color* dialog box opens.

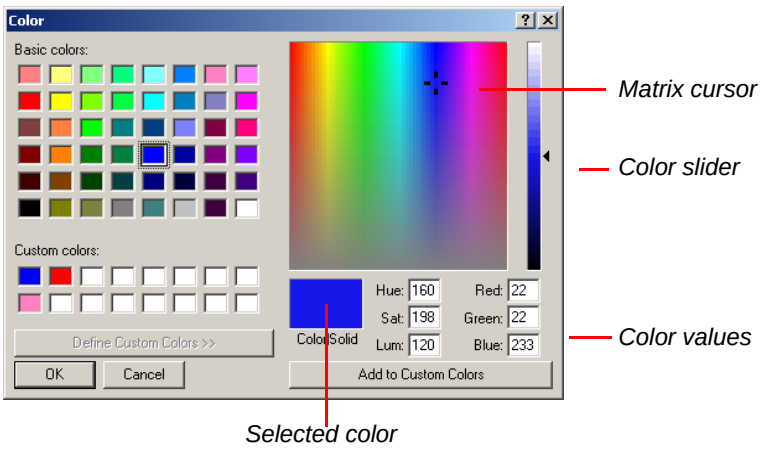


You can select a color from the *Basic Colors* swatches or mix a new color to apply to the background.

— To use a color from the predefined palette, in the *Basic Colors* pane click the color to apply to the background and click **OK**. The Background color box in the Video Sources tab shows the new color.

— To mix a custom color, click the **Define Custom Colors** button to expand the dialog box.

The color matrix and color parameters are displayed.



a. Using the cursor, click any color on the matrix. Use the color slider to adjust the color luminosity. The selected color shows in the *Color/ Solid* box. Numerical values are displayed according to *Red-Green-Blue* color model, and the *Hue-Saturation-Luminance* color model. You can also select a custom color by modifying the numerical values.

b. Click the **Add to Custom Colors** button to add the new color to the list of custom colors.

c. In the *Custom Colors* pane, click the custom color that you defined.

d. Click **OK** to apply the settings.

   The *Color* dialog box closes. The selected color is displayed as the current *Background* color in the *Conference Properties - Video Sources* dialog box.

Layout borders and speaker notation are added and modified in the same way.

Layout border and/or the speaker notation

17. Select the **Layout Border** check box to add borders to the video windows, or select the **Speaker Notation** check box to highlight the speaker's window in the video layout.

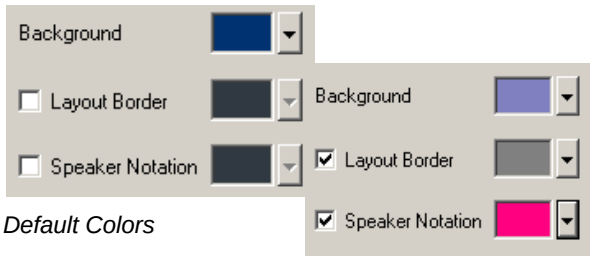
18. To apply a new color to the border and/or speaker notation:

— To modify the color of the border (default color is black) of all windows in a video layout, click the arrow next to the *Layout Border* color box.

— To modify the color used to highlight the window, click the arrow next to the *Speaker Notation* color box.
The *Color* dialog box opens.

19. Select a color for the Layout Border and/or the Speaker Notation, using one of the methods described in *step 16 on page 4-61*.

    Click **OK** to apply the settings.
    The *Color* dialog box closes. The selected colors are displayed in the *Conference Properties - Video Sources* dialog box.



Default Colors

Modified Colors

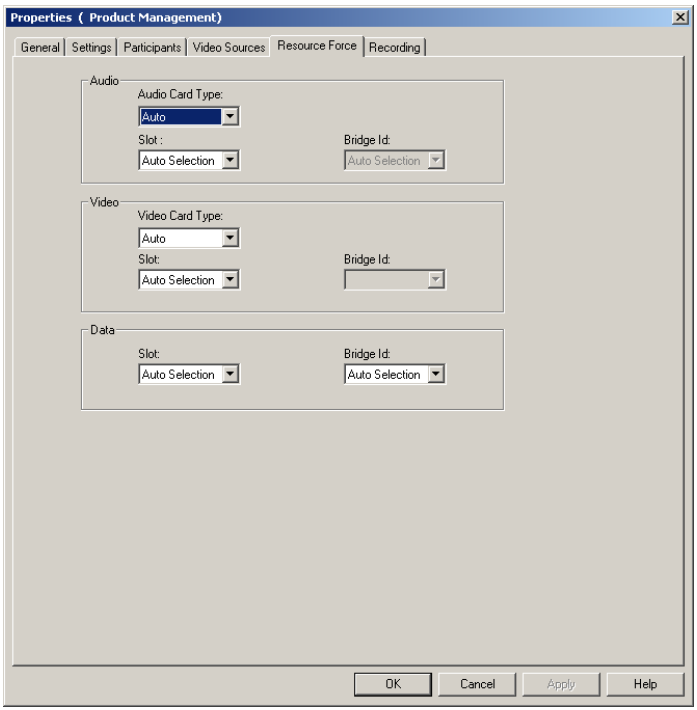
Optional. To modify the automatic card selection by the MCU:

The system automatically selects the cards that will run the conference according to the conference type and MCU configuration. **If you do not need to change the system automatic selection, skip the following step.**
However, when running conferences on MCU with mixed generation of card types (Standard Audio and Audio+, Standard Video and Video+) you may want to override the system selection of cards that tries to maximize the use of the available resources as follows:

- Audio Only conferences are always run on the Audio+ card.
- IVR-enabled Video conferences are run on the Audio+ card. If the *Video Services* are enabled in the IVR Service, the conference will also run on the Video+ card.
- Standard Video conferences (Video Switching and Continuous Presence - Classic) are run on the Standard Audio card and Standard Video card (Continuous Presence - Classic). If Continuous Presence - Quad Views is selected, the conference will run on the Audio+ and Video+ cards.

Manually selecting the cards that will handle the conference allows you to overcome fragmentation in the standard Audio and Video cards. For example, the MCU includes two video cards (six participants each), and you want to schedule four conferences; two conferences with two participants and two conferences with four participants. When running these conferences, the system assigns the first two conferences (with two participants each) to the same Video card, while the third conference (with four participants) is assigned to another video card. This results in insufficient resources for the fourth conference, since the same card must handle all four participants. Using the *Resource Force* tab, you can place the first two conferences (with two participants each) on different video cards, saving the resources for the other two conferences (with four participants each).

20. Click the **Resource Force** tab.
    The *Conference Properties - Resource Force* dialog box opens.



21. In the *Audio* area, select the type of Audio card to use for the conference and the specific card to use by selecting the MCU slot in which the card is installed. Select **Auto** to enable the automatic selection of the resource.

22. In the *Video* area, select the type of Video card to use for the conference and the specific card to use by selecting the MCU slot in which the card is installed. Select **Auto** to enable the automatic selection of the resource.
23. In the *Data* area, select the specific card to use for the conference by selecting the MCU slot in which the card is installed. Select **Auto** to enable the automatic selection of the resource.

Meet Me Per Conference

The *Meet Me Per Conference* tab is enabled if the **Meet Me Per Conference** option was selected in the *On Going Conference Properties - General* dialog box, or if you are defining a Meeting Room. In this tab, you can assign the dial-in numbers to the conference for ISDN and IP participant connections.

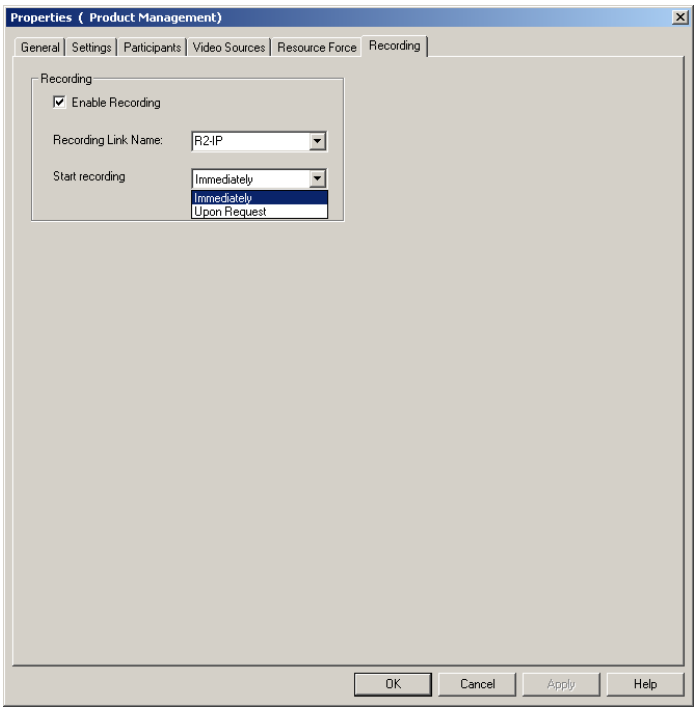
Callers wishing to participate in a *Meet Me Per Conference* conference or Meeting Room must dial one of the dial-in numbers, and are automatically connected to the appropriate conference.

For a description of the *Meet Me Per Conference* and Meeting Room options, see *Chapter 7, "Meet Me per Conferences and Meeting Rooms"*.

Recording

24. Click the **Recording** tab to define recording parameters.

    The *Conference Properties - Recording* dialog box opens.



25. If required, configure recording for the conference, using the following parameters:

Table 4-2: Conference Properties - Recording

Field/Option	Description
Enable Recording	Select this option to enable recording.
Recording Link Name	Select the recording link from the list.
Start recording	Select when to start recording the conference: • ***Immediately*** • ***Upon Request***

Completing the Conference Definition

26. Click **OK** in any of the *Conference Properties* tabs to complete the conference definition.
    The *Conference Properties* dialog box closes.

    If all the requirements are met and the properties are configured correctly, the new conference is added to the On Going Conferences list below the *on Going Conferences* icon and starts immediately. You can click the conference icon to view its status in the *Status* pane of the MGC Manager main window. For information on monitoring On Going conferences, see *Chapter 5*. For information on operations that can be performed during the conference, see *Chapter 6*.

Resolving Scheduling Conflicts

Upon completion of scheduling a Reservation or an On Going Conference, the system checks for scheduling conflicts for individual participants.
A scheduling conflict for a participant results when two or more conferences are set up to occur at the same time or at overlapping times and contain one of the following parameters:

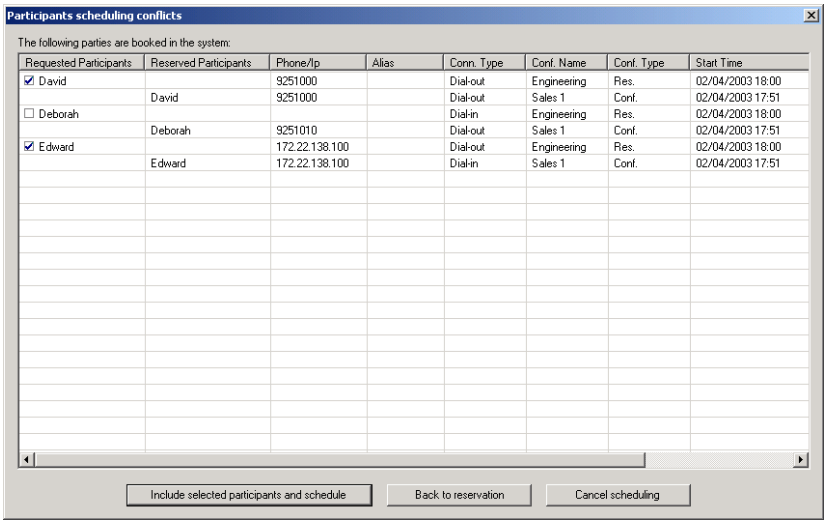
- Participants with the same name
- Participants with the same ISDN/T1-CAS phone numbers
- Participants with the same IP address/Alias

Depending on the connection type that was defined for the participant, MGC Manager looks for specific conflict criteria to determine if the participant is double-booked. Table 4-3 lists these criteria:

Table 4-3: Scheduling Conflict Criteria by Connection Type

Connection Type	Conflict Criteria
Dial-out H.320	• Name **or** Phone Number(s)
Dial-out IP	• Name **and** IP address or Alias • IP address **and** Alias (when both provided)
Dial-in	• Name **or** Phone Number

If a conflict is detected in the Reservation or in an On Going Conference, the *Participants Scheduling Conflicts* window opens, listing the found data.



The following information is displayed:

Table 4-4: Participants Scheduling Conflicts window

Field/Option	Description
Requested Participants	Lists the names of conflicting participants requested to join the conference currently being created.
Reserved Participants	Lists the names of participants already scheduled in previously created conferences whose parameters match those of the newly requested participant.
Phone/IP	Lists the phone numbers or IP addresses of listed participants.
Alias	Lists the aliases of listed participants.
Conn. Type	Indicates the participant's connection type: • ***Dial-in*** • ***Dial-out***
Conf. Name	Lists the names of the conferences in which each participant is defined.

Table 4-4: Participants Scheduling Conflicts window (Continued)

Field/Option	Description
Conf. Type	Indicates the conference type: • ***Res.*** — Reservation • ***Conf.*** — On Going Conference
Start Time	Date and start time of each conference.
End Time	Date and termination time of each conference.

The MGC Manager application checks for conflicts on the MCU on which the conference is being scheduled, while the WebCommander application checks for conflicts on multiple MCUs.

To resolve a scheduling conflict:

1. In the *Participants scheduling conflicts* table, select an action:
   a. Select the check boxes of non-conflicting participants in the *Requested Participants* column, to retain these participants in the currently scheduled conference,
   or
   b. Clear the check boxes of conflicting participants in the *Requested Participants* column, to exclude these participants from the currently scheduled conference.
2. Click one of the following option buttons:
   - **Include selected participants and schedule** - Select this option to allow the system to ignore the found conflict and to schedule the conference.
   - **Back to reservation** - Select this option to return to the current conference definition without scheduling the conference and to redefine the conference parameters.
   - **Cancel scheduling** - Select this option to cancel the current conference definition without defining a new On Going Conference.

Joining an On Going Conference

Defined dial-in participants can connect directly to the conference. Undefined participants can connect to a Standard conference via an Entry Queue, or directly if the conference is defined as a "Meet Me Per Conference" or as a Meeting Room. Defined dial-out participants wait for the system to call them and connect them to the conference.

Conference Access for Defined Dial-in Participants

ISDN Participants

Defined ISDN participants can dial in to a conference directly. For direct dial-in, the participant's CLI (dial-in number) is added to the participant definition and the participants are given the MCU dial-in number. When they dial the MCU number, the system recognizes their CLI number and routes them to their conference accordingly.

When defined participants connect to a "*Meet Me per Conference"* the system behaves in the same way as with undefined participants. For more details, see *"Conference Access for Undefined Dial-in Participants" on page 4-75*.

You can add defined participants during an On Going Conference. For more details, *see Chapter 6, "Adding New Participants to a Conference"*.

For detailed information about Entry Queues, see *Chapter 8, "Entry Queues, Operator Conferences, and Attended Conferencing"*. For information about defining an Audio Only Entry Queue, see the *MGC Manager User's Guide, VoicePlus Edition, Chapter 5, "Meeting Rooms and Entry Queues"*.

H.323 Participants - Simple Dial-in (no Gatekeeper)

In simple dial-in, no gatekeeper is required if the participant uses the IP address of the card to dial-in. The participant is provided with the IP address of the IP card installed in the MCU. The participant enters this IP address when dialing to the conference. When connecting, the participant is routed to the appropriate IP card according to the specified IP address. The system determines the target conference according to the participant's IP address entered during the participant properties definition.

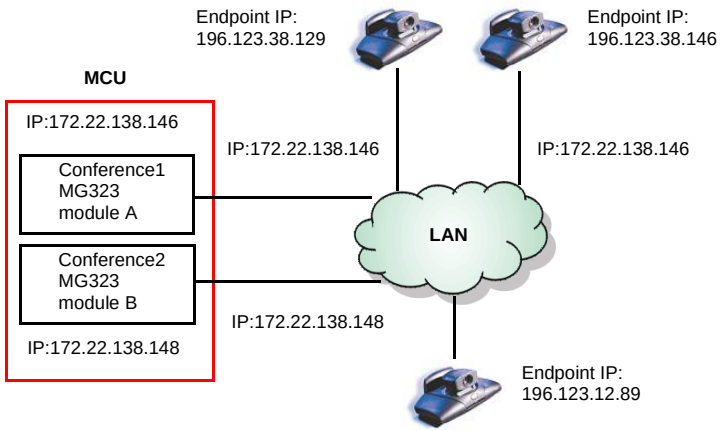


Figure 4-1: H.323 Participant Simple Dial-in (No Gatekeeper)

In simple dial-in, the MGC Manager operator must manage the system resources by giving the appropriate IP address of the IP card to each of the participants.

In this mode, resource sharing between IP cards is unavailable. If eleven ports are taken by currently defined participants, it will be impossible to add a twelfth participant who requires two ports, even if another card has enough ports to allocate to that participant.

H.323 Participants - Simple Dial-in (with Gatekeeper)

When using an H.323 alias to dial in to the MCU, a gatekeeper is required to provide address translation and routing to the IP card. When the participant connects to the conference, the participant enters the alias of the IP card as the dialing string. The Gatekeeper routes the call to the appropriate IP card according to the dialed alias. MGC Manager determines the conference to which the participant is assigned according to the participant's defined alias or IP address. The aliases for the participant and the card must be defined in the E.164 format, that is, using digits 0-9, * and #.

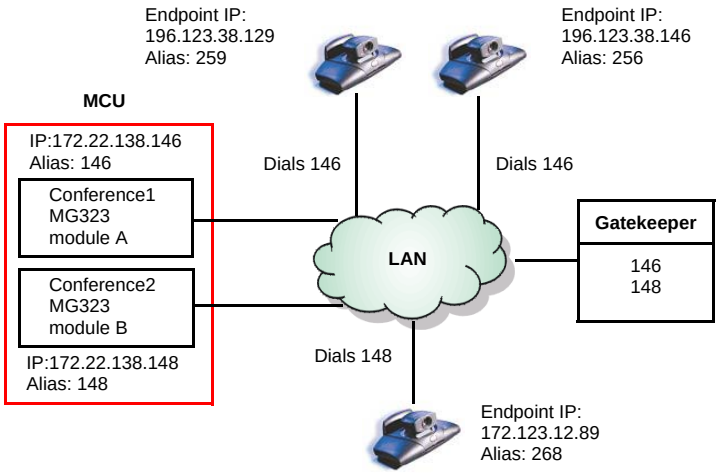


Figure 4-2: H.323 Participant Simple Dial-in (with Gatekeeper)

H.323 Participants - Advanced Dial-in

In advanced dial-in, one *IP Network Service* is defined for all the IP cards installed in the system. This IP Network Service is registered in the gatekeeper using a prefix (which is defined in the E.164 format, that is, using digits 0-9, * and #). This IP Network Service Prefix is also entered in the *IP Network Service Properties - H.323* dialog box and is given to the participants as the dial-in number.

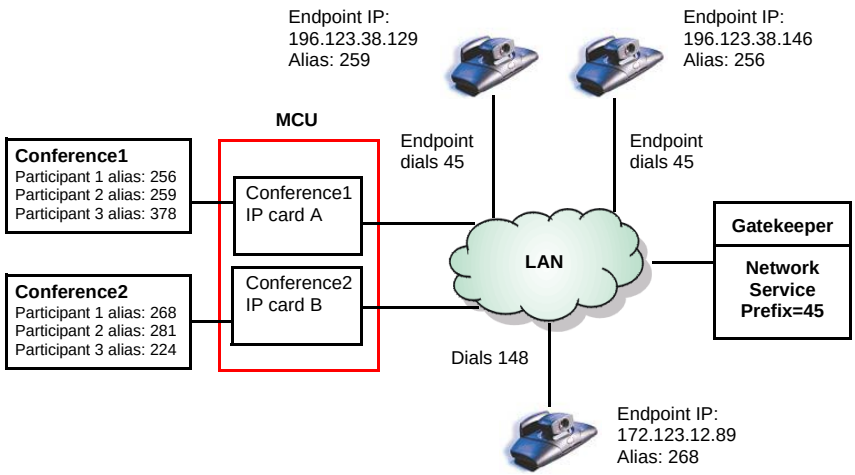
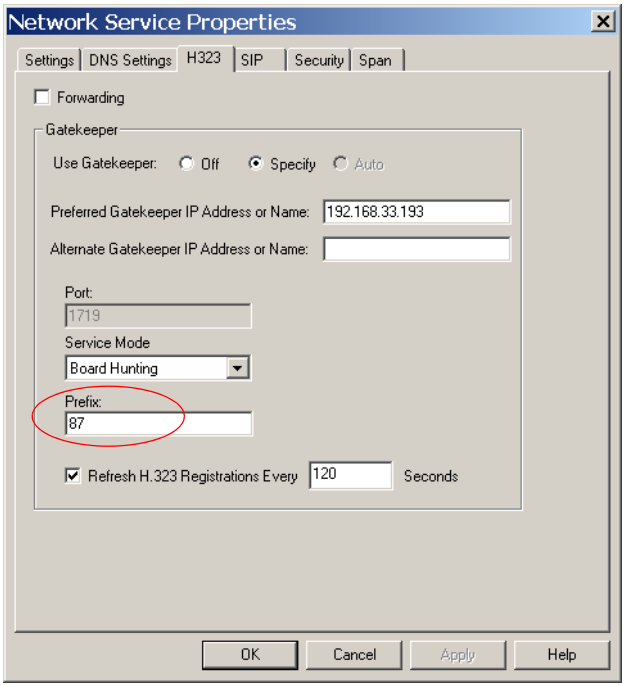


Figure 4-3: Advanced Dial-in H.323 Participant

When the participants dial in, the call arrives at the gatekeeper. The gatekeeper locates the MCU and tries to allocate a port from the first free IP card. If the resource is available, the participant is connected and routed to the appropriate conference according to the IP address/alias as defined in the *Participant Properties* dialog box. If the resource is unavailable from the first IP card, the system will look for the port on any available IP cards, and allocate the resources automatically, according to their availability. If no port is available, the connection will be rejected.

In this mode, the system is enabled to automatically allocate resources to run conferences, saving you time and effort in scheduling conferences.

You can view the Network Service Prefix in the *Network Service Properties - H.323* dialog box.



The gatekeeper's behavior is dependent on the type of gatekeeper service chosen as the *Service Mode* (in the *IP Network Service Properties - H323* dialog box).

Currently, only Polycom, RadVision and VCON MXM gatekeepers are known to support the Network Service Prefix option. Gatekeepers of other manufacturers may encounter problems while defining such a conference.

For gatekeeper functionality and interoperability, see the *MGC Manager Administrator's Guide, Chapter 3, "Defining an IP Network Service".*

Conference Access for Undefined Dial-in Participants

Undefined participants can access a conference directly or via an Entry Queue. When dialing directly to the conference, if an IVR was assigned to the conference, the participant first enters the IVR Queue and after interacting with the IVR system and providing the appropriate information joins the conference.

Conference Direct Dialing and Access

In this mode, the conference is set as *Meet Me Per Conference* or *Meeting Room*, no IVR service is assigned to the conference and a dial-in number or dial string is assigned to the conference. For a detailed description of Meet Me per Conference and Meeting Rooms definition, see *Chapter 7*.

The conference dial-in number (ISDN, PSTN and T1-CAS), dialing string (H.323) or SIP URI (SIP) are given to all the conference participants who use it to directly connect to the conference. Using this mode, any participant who dials the conference number/string can connect to the conference until all the MCU resources are utilized or the maximum number of participants is reached.

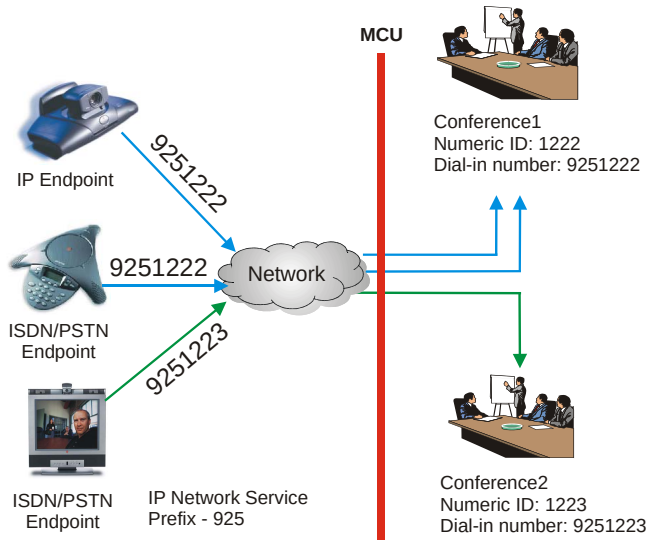


Figure 4-4: Direct Conference Access

Undefined Dial-in ISDN Participants

ISDN and PSTN participants dial the number assigned to the conference with the appropriate area codes. As shown in Figure 4-4, the dial-in number assigned to conference1 is 9251222 and the dial-in number assigned to conference2 is 9251223. Participants who dial 9251222 are automatically connected to conference1.

Undefined Dial-in H.323 Participants

For H.323 participants, the dialing string is composed of the MCU prefix in the Gatekeeper and the conference ID. As shown in Figure 4-4, the IP Network Service Prefix was defined according to the ISDN number, and the conference numeric ID was defined to match the ISDN number allocated to the conference.

For example:

Gatekeeper Prefix	925
Conference ID	1222
Conference Name	Conference1
The participant dials	9251222 or 925CONFERENCE1

Undefined Dial-in H.323 Participants Conference Access Using an IP Address

If there is no gatekeeper defined for the network, H.323 participants dial the IP address of the IP card and the conference Numeric ID, separated by ##.

For example:

IP address of the IP card	172.22.30.40
Conference ID	1222
The participant dials	172.22.30.40##1222

If an Entry Queue was set as default, if dialing to the conference using the IP address of the IP card or the Network Service Prefix fails because the conference Numeric ID is incorrect, the call will be routed to the default Entry Queue.

Dial-in SIP Participants

For SIP participants the dialing string is composed of the conference name and domain name in the following format:

conference_name@domain_name

For example: conference1@polycom.com

If the IP address of the MCU IP card is known, the SIP endpoint can dial the IP address of the IP card or its host name and be routed to the default Entry Queue.

Direct Conference Dialing and Access Via IVR

Interactive Voice Response (IVR) is an application that allows callers to communicate with the conferencing system over the DTMF input device such as a telephone (for audio participants) or the endpoint's remote control (for video participants). IVR automates the connection process and the various requests during the On Going Conference. To enable the participants and chairperson to perform operations during the conference an IVR Service must be assigned to the conference. The IVR Service is used for both attended and unattended conferences.

In IVR-enabled conferences, participants dial the conference dial-in numbers and enter the conference IVR queue as part of the connection process. Once in the IVR queue, they have to enter the conference password and other personal information, using touch-tone codes as input to menu driven scripts and voice prompts that are part of the IVR Service. Once the correct information is entered, the participants connect to the conference. This ensures that only authorized callers join the conference.

In addition, participants can request the operator's help while waiting in the conference IVR queue or during the On Going Conference and the conference chairpersons can perform various operations from their endpoint during the On Going Conference.

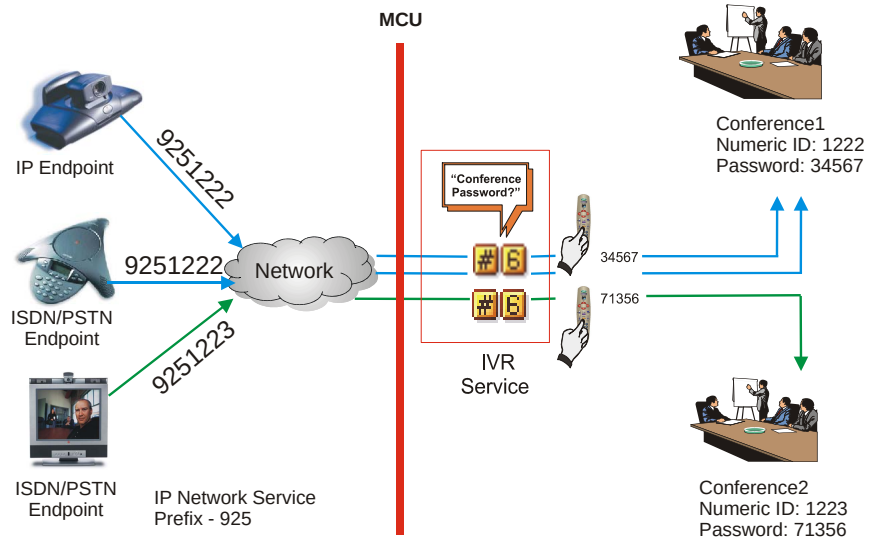


Figure 4-5: Conference Access via IVR Queue

Participants dial in directly to the conference in the same way as for direct dialing as described on page page 4-76. Once they reach the conference, they enter the conference IVR queue where they are requested to enter the conference password, the chairperson password (only for the meeting chairperson) and other information using the remote control or the telephone touch-tone keypads.

- The system can automatically allocate the conference and chairperson passwords (depending on the MCU configuration). For more information on system configuration, see the *MGC Administrator's Guide, Chapter 5, "Edit system.cfg".*
- Dial-out participants (operator dial-out or system dial-out) connecting to the conference can also enter the IVR queue, if the IVR Service assigned to the conference is configured to prompt dial-out participants for conference password.

Conference Access via Entry Queue

Entry Queue is a call routing method in which all participants dial the same dial-in number and then they are routed to the appropriate conference according to the conference password or conference numeric ID (depending on the system's configuration) they enter. Callers are guided to the conference

using menu-driven scripts that are part of the Entry Queue Service. The user inputs touch-tone signals in response to voice prompts.

Using an Entry Queue minimizes the number of dial-in numbers that are required for the MGC unit to handle conferences and dial-in participants. In addition, it enables service providers to advertise their services with one or two telephone numbers that can be used for all the conferences (for example, 1-800-POLYCOM). In addition, the Entry Queue is assigned a numeric ID for IP dialing.

Participants can be moved from the Entry Queue to the conference if *Entry Queue Access* is selected for the conference. Video Switching conferences that are accessed from an Entry Queue must have the same video, audio and line rate settings as defined for the Entry Queue used for accessing these conferences. In this mode, participants connecting to that conference follow a two-stage process:

1. Participants connect to an Entry Queue, where they are routed to their conference in one of two ways:
   - — According to the Numeric ID (NID) or conference password they enter (depending on the MCU configuration).

     or
   - — Wait for the Operator's assistance. The Entry Queue Service is set to Attended mode (*On Hold for Operator Assistance*).
2. Participants are moved to the conference and connect to the conference in one of the following ways:
   - — Directly, without any additional operation from the participant's endpoint.
   - — If an IVR Service was assigned to the conferences, by entering the conference IVR queue where participants are prompted for an entry password and/or chairperson password (depending on the IVR Service configuration). Once the participants provide the correct information, they are admitted to the conference.
   - — Wait for the Operator's assistance. The IVR Service assigned to the conference is set to attended mode (*On Hold for Operator Assistance*).

Entry Queues are defined separately in the MGC Manager application. For more details, see *Chapter 8*.

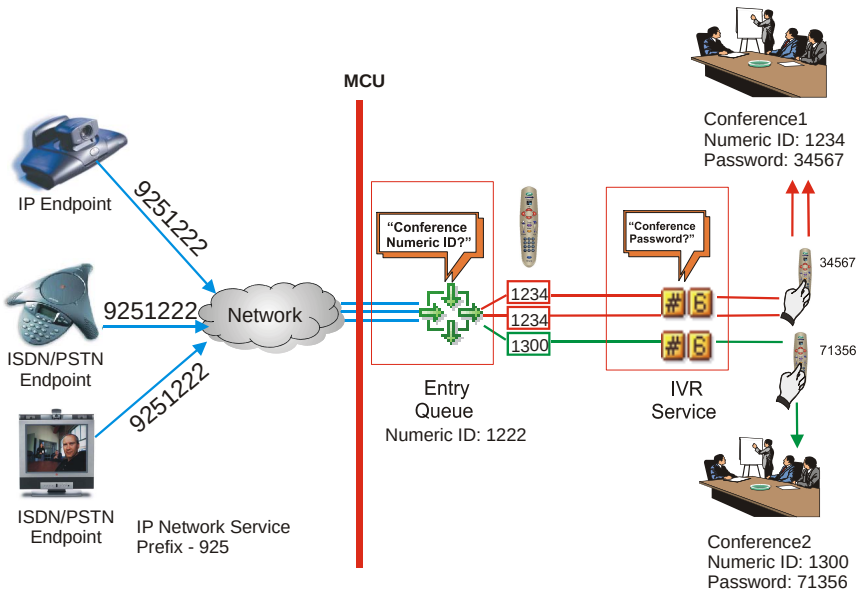


Figure 4-6: Conference Access via Entry Queue using Numeric ID and Conference IVR

In Figure 4-6, one or several dial-in numbers and a Numeric ID are allocated to an Entry Queue. In addition, a numeric ID is assigned to each conference and a conference password and chairperson password may be defined. The dial-in number (which is usually the same for all participants regardless of the conference they attend), and the appropriate conference numeric IDs are communicated to conference participants. When participants dial-in using the number communicated to them, they connect to the Entry Queue where they are requested to enter the appropriate conference Numeric ID. According to this conference ID, participants are routed to the appropriate conference.

If the MCU is configured to prompt for conference password for routing from the Entry Queue to the destination conference, as shown in Figure 4-7, one or several dial-in numbers are allocated to an Entry Queue and a password is assigned to each conference. The system also allocates a Numeric ID to the Entry Queue and each of the conferences. When participants dial-in using the number communicated to them, they connect to the Entry Queue where they are requested to enter the appropriate conference password. According to this password, participants are routed to the appropriate conference.

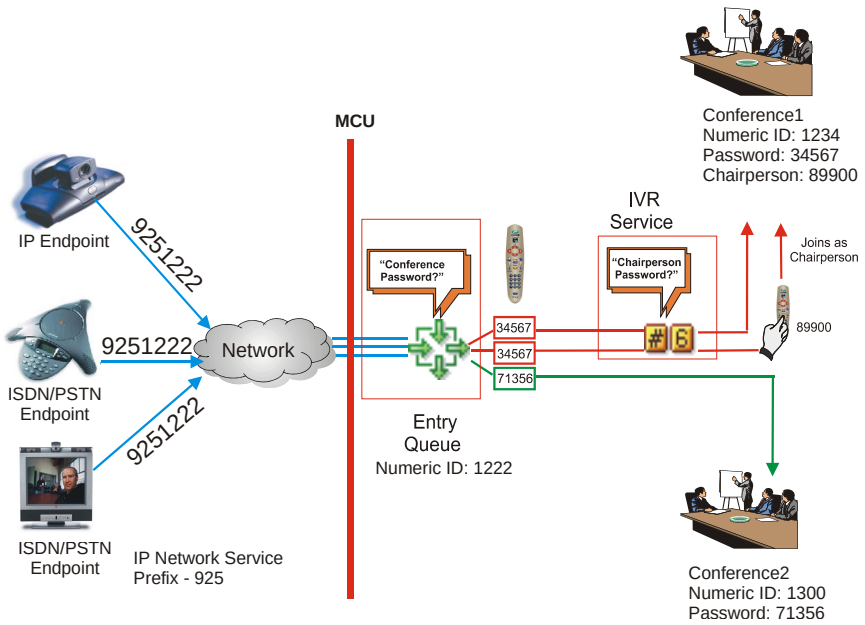


Figure 4-7: Conference Access via Entry Queue using Conference Password and Conference IVR

When an IVR Service is assigned to the conference, participants are guided to the conference by voice prompts and are requested to enter the required chairperson password (or conference and chairperson passwords when Numeric ID are used for routing) or wait to be automatically connected to the conference. They can also be prompted for additional information such as their billing code. If no IVR Service is assigned to the conference, participants are moved directly from the Entry Queue to the conference.

Undefined Dial-in ISDN Participants

As shown in Figure 4-6, the dial-in number assigned to the Entry Queue is 9251222. The Numeric ID assigned to Conference1 is 1234 and to Conference2 is1300. ISDN and PSTN participants dial 9251222 with the appropriate area codes. When the connect to the Entry Queue they enter the conference Numeric ID or password to be routed to the appropriate conference.

H.323 Participant

H.323 participants dial [Network Service Prefix][Entry Queue ID/Name].

Example:

Network Service Prefix	925
Entry Queue ID	1222
H.323 participants dial	9251222

H.323 participants can bypass the Entry Queue voice messages by adding the correct Conference ID of destination conference to the initial dial string:

[Network Service Prefix][EQ][##Destination Conference ID#]

Example:

Conference ID	1234
H.323 participants dial	9251222##1234#

H.323 participants can also add the Conference Password to the initial dial string:

[Network Service Prefix][EQ][##Destination Conference ID][##Password#]

Example:

Conference ID	1234
Conference Password	3456
H.323 participants dial	9251222##1234##3456#

SIP Participants

Using an Entry Queue minimizes the number of conferences that require registration with the SIP server and enables using one URI address for all dial-in connections, using the format:
<Entry Queue name>@<domain name>

Example:

Entry Queue Name	EQ1
Conference ID	1234
Conference Password	3456
Domain Name	polycom.com
SIP participants dial	eq1@polycom.com

When dialing from a *Microsoft Windows Messenger* endpoint (which does not have DTMF capabilities), the first participant (who, in Ad Hoc conferencing, creates the new conference) enters the Entry Queue name followed by the target conference name and the numeric ID in the format:
EQ name(target conference name)(target conference numeric ID).

For example, **EQ1(sales)(12345)**.

In this example, the Entry Queue name is EQ1, and a new On Going Conference by the name *sales* with the numeric ID *12345* will be created on the MCU.

You do not need to add the domain name to the conference name as it is automatically added by Microsoft Windows Messenger when sending the request to the SIP server.

The other conference participants can connect to the conference directly by entering either *sales* or *12345*.

Conference Access for Dial-out Participants

In Video or Audio Only conferences, dial-out participants are connected directly to the conference. In IVR-enabled Audio Only and Video conferences, dial-out participants enter the Entry Queue and/or IVR queue where the participant may be requested to enter the conference password or any digit to confirm the connection.

Dial-out to SIP Participant

The dial-out scenario is identical to the dial-in scenario, except for the initiating party, that is the MCU. In dial-out conferences, the endpoint clients need to be registered, so the registrar can provide location details when the MCU invites them to join the conference.

For example, the MCU dials: **endpoint1@polycom.com**.

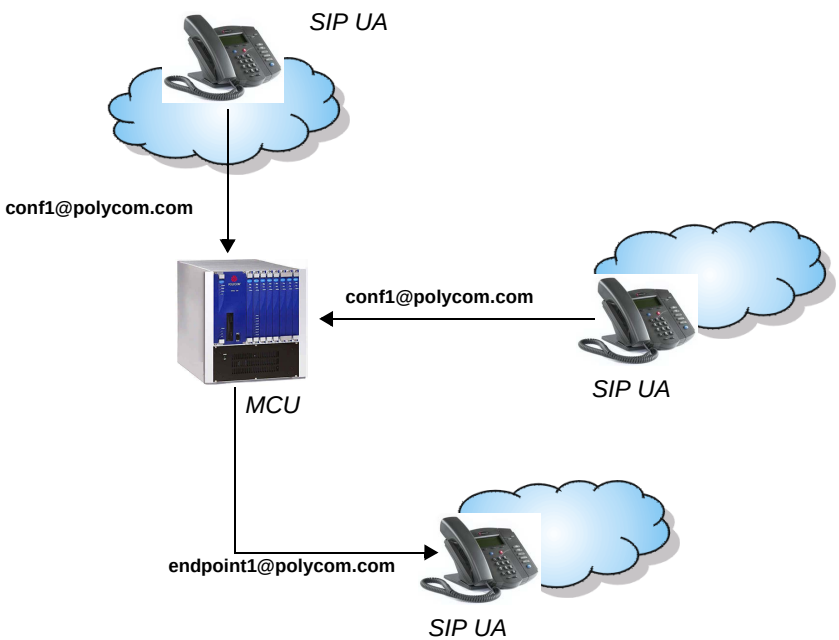


Figure 4-8: SIP Environment - Dial-in and Dial-out

Defining Participant Properties

You can define new participants while setting up an On Going Conference or a Reservation. Particpants can also be defined while a conferences in progress by using the right-click menu or the conference toolbar. In addition, you can define a participant template in the Participant Templates Database/ Participant Template file.

If *Auto Detect* is selected for the dial-out participant, you may define the participant's name and phone number and the system will automatically detect the participant capabilities and connect him/her accordingly. Dial-in "undefined" participants may connect to the conference if "Allow Undefined Participants" is selected in the *Participants* tab and if there are available resources. The conference may also include defined dial-in participants. These participants are identified by their CLI number (ISDN) or Alias (H.323).

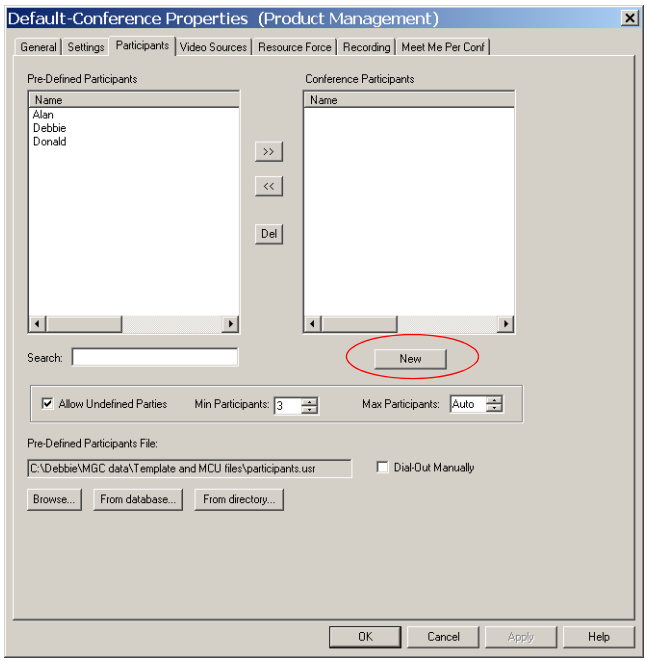
When the *Auto Rate Detect* option is active for a dial-out participant, the system automatically detects the participant's line rate, and connects the participant at the line rate appropriate to the endpoint, up to the maximum line rate defined in the conference settings. This option is advantageous when all participants are connected at the same line rate defined for the conference.

For more details about template definition, see *MGC Manager User's Guide, Volume II, Chapter 7*.

When defining the participant during an On Going Conference, the participants default parameters are set according to the conference media and type. For example when defining the participant during an On Going Audio Only conference, the Audio Only check box is selected, and only Audio Only participants can be defined.

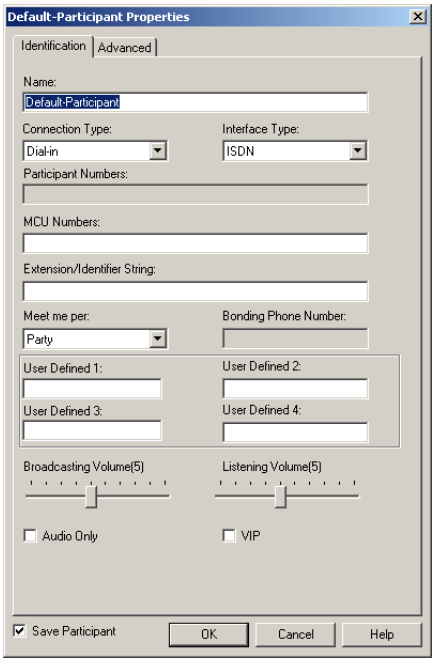
To define a new participant during an On Going Conference or Reservation Definition:

- In the *Conference Properties - Participants* dialog box, click the **New** button.



The *Participant Properties - Identification* dialog box opens.

When defining a new participant, the *Participant Properties - Identification* dialog box opens.



The system displays the default parameters as defined for the default database template. For more details, see *MGC Manager User's Guide, Volume II, Chapter 7*.

1. Define the following parameters

Table 4-5: Participant Properties - Identification

Field/Option	Description
Name	Enter a unique name for the participant, using up to 80 characters.

Table 4-5: Participant Properties - Identification (Continued)

Field/Option	Description
Connection Type	Select the connection type: • ***Dial-in*** - Participants call the MCU at conference time. When selecting this type, the *Meet Me Per* options are enabled for ISDN/MPI/ATM participants. ISDN/MPI/ATM participants dial the MCU's dial-in number is provided. H.323 participants dial the IP Network Service Prefix and the conference Numeric ID. Alternatively, they can dial the IP address of the IP card or its alias. SIP participants dial the conference URI (name and domain name). **Notes:** • Dial-in T1-CAS participants can only connect as undefined participants. • Undefined participants can join conferences by dialing in, as long as there are sufficient card resources. • ***Dial-out*** - At the conference start time, the MCU calls the participant. When defining the participant, you must enter the participant's contact details (dial Number/IP address or Alias/ SIP URI). **Note:** If the *Dial-Out Manually* option is disabled in the *Conference Properties - Participant* tab, the MCU automatically calls the participant at conference time. If this option is enabled, the operator must connect the participant. • ***Direct*** - For participants who are directly connected to the MCU through a leased line. This connection type is applicable to ISDN, MPI, and T1-CAS interfaces. No dialing is required.

Table 4-5: Participant Properties - Identification (Continued)

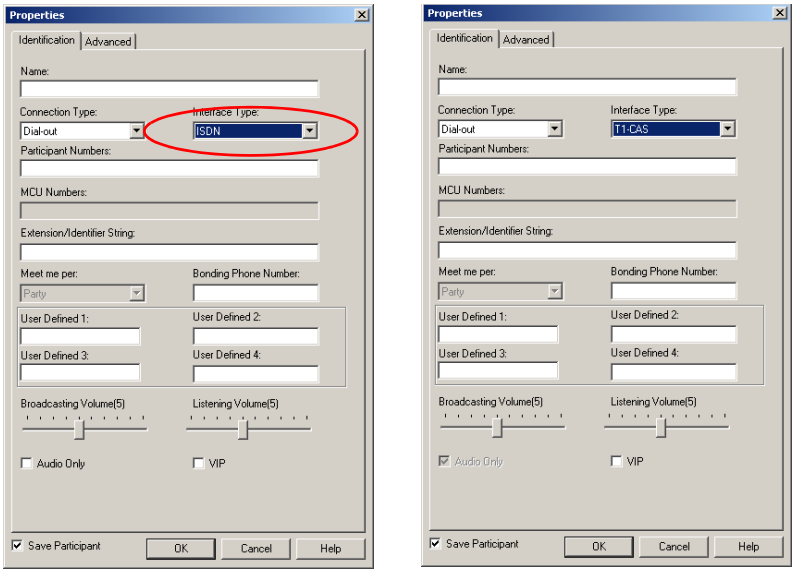
Field/Option	Description
Interface Type	Select the network type used by the participant to connect to the conference: • ***ISDN*** - for endpoints connecting via ISDN or PSTN lines. • ***ATM*** - for endpoints using the ATM network. • ***MPI*** - for endpoints using a serial connection. • ***T1-CAS*** - for endpoints using a Channel Associated Signaling (CAS) connection. As T1-CAS participants are Audio Only, the MCU must be configured to allow them in video conferences. For more details on the definition of Audio Only T1-CAS participants, see the M*GC Manager User's Guide, VoicePlus Edition, Chapter 2, Defining Participant Properties"*. • ***H.323*** - the endpoint uses the H.323 protocol • ***SIP -*** the endpoint uses the SIP protocol.

The selection of the **Interface Type** changes the displayed fields in the *Participant Properties* dialog box.

ISDN/ATM/MPI/T1-CAS Participant Definition

ISDN/ATM/MPI/T1-CAS participants have the same parameters as they all use the H.320 communication protocol.

To define a new ISDN/ATM/MPI/T1-CAS participant:



1. Define the following ISDN/ATM/MPI/T1-CAS parameters

Table 4-6: ISDN/ATM/MPI/T1-CAS Participant - Identification

Field/Option	Description
Participant Numbers	This parameter is enabled for the Dial-out connection type, or when the Dial-in *Meet Me Per Conference - MCU* option is selected. Type the participant's number (including country and area codes when required) to be dialed by the operator when connecting the participant to the conference. Add a semicolon (;) between numbers when several numbers are to be assigned to a participant (one for each channel). For example, 9251222; 9251223; ….;9251xxx (in aggregation mode).

Table 4-6: ISDN/ATM/MPI/T1-CAS Participant - Identification (Continued)

Field/Option	Description
Participant Numbers (cont.)	If the *Meet Me Per MCU* option is enabled, the CLI number is used to identify the participant and route them to the appropriate conference. Enter the participant's CLI number. **Note:** In order to support Bonding with specific telecommunication switches, the pound key (#) symbol needs to be added to the Dial-out number sequence.
MCU Numbers	(Available only for the Dial-in connection.) Enter the MCU number as allocated to the MCU by the carrier. The dial-in numbers are defined in the ISDN *Network Services - Span* dialog box. Add a semicolon (;) between numbers when several numbers are to be assigned to the MCU. If left blank, when the conference starts the MCU automatically assigns a dial-in number from the list of numbers defined in the ISDN Network Service. **Note:** During an On Going Conference, the MCU numbers are listed in the *Network+Phone/IP* column of the main window *Status* pane. The format (number of digits) depends on how the dial-in numbers are forwarded from the PBX switch to the MCU, if the PBX truncates part of the number.
Extension/ Identifier String	Can be used to define a recording participant (if not using the recording links), for example to record with a Prairie external recording system. For a description of recording options and setup, see the *MGC Manager User's Guide, Volume II, Chapter 9, "Recording".* This option can also be used when you want to define an extension for dial-out participants.

Table 4-6: ISDN/ATM/MPI/T1-CAS Participant - Identification (Continued)

Field/Option	Description
Meet me per	(Available only for the *Dial-in* connection) Select: • ***Party*** - The participant dials a single number for each group of channels in use. • ***Channel*** - The participant dials a different number for each channel. • ***MCU-Conference*** - A single dial-in number (DID) is assigned to all the conferences running on a certain MCU. The MCU phone number is entered in the *Network Service – Span and Phones* dialog box. The participants are routed to the appropriate conferences according to their phone numbers (CLI) that are entered in the *Participant Numbers* box. When a participant dials in using the MCU number, the MCU identifies the participant phone number and routes the participant to the appropriate conference. This option should be used only with PBXs supporting the CLI (Caller ID) option.
Bonding Phone Number	(Available only for the *Dial-out* connection type, and should be used only if Bonding is the selected Aggregation method for the participant.) Enter a single number for all the aggregated channels. The system automatically assigns the appropriate numbers to the remaining channels. With some switches, Bonding is supported only when the pound key (#) symbol is added to the Dial-out number sequence. If left blank, the MCU automatically assigns the first number that appears in the *Participant Phone Number* box as the bonding number when the conference starts.

Table 4-6: ISDN/ATM/MPI/T1-CAS Participant - Identification (Continued)

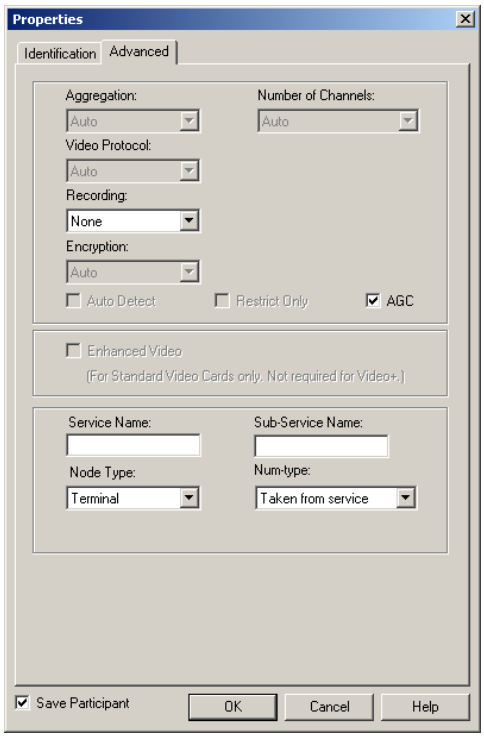
Field/Option	Description
User Defined fields 1-4	In any or all of the four *User Defined* fields, enter general information for the participant, such as the participant's E-mail address, telephone number, company name, location, or any required information. The titles of the *User Defined* fields can be modified in the *Database Manager -> Defaults -> User Defined Defaults* and loaded to the MGC Manager application. For details, see Chapter 3, "Loading the User Defined Default Set to the MGC Manager Application" on page 3-31. **Note:** The *User Defined* fields are displayed only if the *Show User Defined Fields in Participant Parameters* box is selected in the *Database Manager -> Defaults ->User Defined Defaults*.
Broadcasting Volume *Listening Volume*	You can control the volume of the audio transmitted from the participant to the conference (broadcasting volume), and from the conference to the participant (listening volume). To adjust the volume, move the slider. The volume scale is from 1 to 10, where 1 is the weakest and 10 the strongest volume. The volume of each endpoint's audio at connection time is set to 5. One movement of the volume slider increases or decreases the volume by one unit, equivalent to 3db.
Audio Only	When checked, indicates an Audio Only participant. This option is automatically selected for T1-CAS participants and cannot be canceled.
VIP	When checked, changes the participant's status to VIP to distinguish participants who require special attention. **Note:** The VIP status can also be changed during the On Going Conference.

Table 4-6: ISDN/ATM/MPI/T1-CAS Participant - Identification (Continued)

Field/Option	Description
Save Participant	(Optional) When checked, saves the participant definition as a template in the User Defined template file or in the selected Database Group. **Note:** This check box appears only when defining a participant for a Reservation template in the Participant Template file or when defining a participant during a conference when *Database Group* is the source.
Participant Linked	This check box appears only when defining a participant during the definition of a Reservation template in the database. Select this option to save the participant as a template in the database and link the participant to the Reservation template. The participant is assigned to the selected database Group. If this option is cleared, the participant is embedded in the Reservation template and his/her parameters are not saved in the database as a Participant template for future use.
Label	(Optional) This field appears only when participant definition is done directly in the database and displays the label assigned to the participant. The label is used for filtering the Participant Templates list in the database. Non-administrative users can assign only the labels assigned to them. Users with administrator rights can assign any label created in the system. During the Reservation Template definition, the Label assigned to the Reservation Template is also automatically assigned to the Participant Template. The labels are defined by administrators in the MGC Database Manager module. For detailed information on template types and use, refer to the *MGC Manager User's Guide Volume II, Chapter 7, "Database Templates".*

The definition of the *Advanced* parameters may be skipped for most participants, but if you need to change the defaults or define additional settings, open the tab.

2. Click the **Advanced** tab.
The participant's *Properties - Advanced* dialog box opens.



3. If required, define the following parameters:

Table 4-7: ISDN/ATM/MPI/T1-CAS Participant - Advanced

Field/Option	Description
Aggregation	Select the aggregation method for ISDN/ATM/MPI video participants: • ***Auto*** - Connects participants to the conference according to the conference settings and their endpoint capabilities. When connecting to the conference, the endpoint and the MCU exchange capabilities information. During this exchange, the MCU identifies the aggregation mode used and connects the endpoint accordingly. • ***H221*** - The standard communication protocol, in which a different number is assigned to each channel. When connecting the participant to the conference (Dial-out), each of these numbers are dialed. • ***Bonding*** - A communication protocol that aggregates two to thirty 64 Kbps B channels, to act as one large bandwidth channel. If this option is enabled, set the *Connection Type* in the *Identification* tab to Dial-out and enter the Phone number in the *Bonding Phone Number* field. • ***Multi-Rate*** - A communication protocol in which channels are aggregated to form one dedicated line. The MGC Manager currently supports aggregation of 6 channels to form one line rate of 384 Kbps (64 X 6=384). In such a case, the network ensures that all six channels are synchronized and there are no intervals between the arrivals of the data packets.
Number of Channels	Indicates the number of channels used for a video ISDN/ATM/MPI connection. Select **Auto** to use the conference's Line Rate setting. This is also the mode recommended for ATM connections. If the participant's setting is different from the conference setting, select the appropriate number of channels. During an On Going Conference this setting may be disabled.

Table 4-7: ISDN/ATM/MPI/T1-CAS Participant - Advanced (Continued)

Field/Option	Description
Video Protocol	Select the video compression standard: • ***Auto*** - Select this option to use the conference's Video Protocol settings and to enable the dynamic adjustment of the Video Protocol. For more details, see "Defining Advanced Media Settings" on page 4-40. • ***H261*** - the video compression standard mandatory to all endpoints. • ***H263*** - a compression standard that provides improved video quality. This standard is not supported by all endpoints. • ***H264*** - a video compression standard that improves video quality at a line rate lower than 384 Kbps. • ***H264**** - a Polycom proprietary standard for video compression that improves video quality at a line rate lower than 384 Kbps. **Note:** — When video protocol is set to *Auto* in the *Conference Properties – Settings*, this overrides the Video Protocol settings in the *Participant Properties – Advanced* dialog box as the dynamic mode is enabled and the video settings are forced by the MCU. — When Video Protocol is set to H.263 or H.264 and the endpoint does not support it, the participant is connected as Secondary (Audio only). — During an On Going ISDN/ATM/MPI conference, this setting may be disabled.
Recording	Designate the participant as an audio recording port connected to an external recording device: Select one of the following: • ***None*** – The participant is not connected to an external recording device. • ***Dial up*** – The participant is used as the recording port to an external device. For more details, see the *MGC Manager User's Guide Volume II, Chapter 9, "Recording".*

Table 4-7: ISDN/ATM/MPI/T1-CAS Participant - Advanced (Continued)

Field/Option	Description
Encryption	Media information can be encrypted using an AES 128 algorithm. The *Encryption* options are affected by the settings of the participant level flag in the system.cfg. Select the appropriate encryption setting for the participant: • ***Auto*** - The conference encryption setting *(encrypted/ non-encrypted)* is applied to the participant. In this mode, the participant connects as encrypted only if the conference is defined as encrypted. • ***Off*** - The participant joins the Conference as *non-encrypted*. • ***On*** - The participant joins the Conference as *encrypted*. For more details, about encryption see the *MGC Manager User's Guide Volume II, Chapter 1, "Media Encryption"*.
Auto Detect	Select this option to enable the MGC unit to automatically detect the line rate and video capabilities of incoming ISDN calls and connect the participant accordingly, without prior definition of the participant properties. The participant can be connected at the maximum line rate set for the conference. When this option is selected, the following parameters are automatically detected by the MCU and therefore are disabled: Aggregation, Number of Channels, Video Protocol and Restrict Only. **Note:** This option is disabled for participants using the MPI and ATM *Interface Types*.
Restrict Only	Select this check box to indicate that the ISDN/ATM/MPI participant is using a restricted line whose transfer rate per channel is 56 Kbps (instead of 64 Kbps). This option is valid for a participant in Transcoding or Continuous Presence conferences only.

Table 4-7: ISDN/ATM/MPI/T1-CAS Participant - Advanced (Continued)

Field/Option	Description
AGC	The Auto Gain Control (AGC) mechanism regulates audio noise and volume by balancing the received signal to all participants. Different endpoints and phones produce specific source noises and volume. To provide a constant output amplitude, AGC can be applied to all incoming audio streams prior to mixing, thereby dynamically adjusting the amplification of the input signal. AGC is automatically enabled for all participants. Clear this check box to disable this option for the participant.
Enhanced Video	This option is applicable to Standard Video cards and is not required for participants connecting to conferences running on Video+ cards (that provide high quality video combined with high line rates using one video port instead of two). The MGC unit can provide high quality video (30 frames per second for incoming and outgoing video streams) for line rates up to T1/ E1 in Transcoding and Continuous Presence conferences. This is done by allocating two video ports to the participant. One video port is used for encoding, while the other is used for decoding the incoming video stream. Select this option to enable the high quality video feature for the participant. **Note:** • To work with 30 frames per second, the High Frame Rate flag in the system.cfg must be enabled. • To work with bit rates higher than 768 Kbps, the High Bit Rate flag in the system.cfg must be enabled. • During an On Going ISDN/ATM/MPI connected conference this setting can be greyed out. • This option is disabled for Video Switching conferences.
Service Name	Enter the name of the *Network Service* to be used to connect the ISDN/ATM/MPI/T1-CAS participant to the conference exactly as it is defined in the Network Service list (the system is case sensitive).

Table 4-7: ISDN/ATM/MPI/T1-CAS Participant - Advanced (Continued)

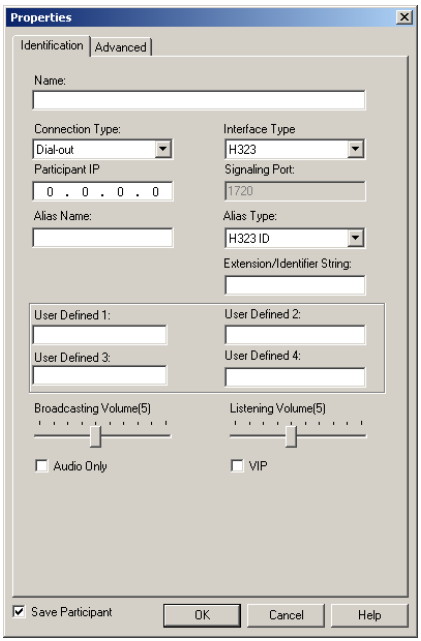
Field/Option	Description
Service Name (cont.)	If left blank, the default *Network Service* is used, depending on the selected connection type. For example, if the selected connection type is ISDN, the default ISDN Network Service is used. For more information on Network Services, refer to the *MGC Administrator's Guide, Volume II, Chapter 3.*
Sub-Service Name	This field is applicable to ISDN participants only. If a sub-service is used, enter the sub-service name exactly as it appears in the selected Network Service definition. If left blank, the default sub-service defined in the selected Network service is used.
Node Type	Select the node type from the drop-down list. The available options for ISDN/ATM/MPI participants are: • ***MCU*** - Choose this setting for a dial-out participant in a DTMF Enabled Cascaded conference. • ***Terminal*** (default) - Use this setting at all other times.
Num-type	Select the type of communication line for ISDN/ATM/MPI participants. The available options are National; International; Network Specific; Subscriber; Abbreviated; Taken from Service. These options represent programs provided by the carrier, and are defined in the Network Service. Select **Taken from Service** to indicate that the program should be retrieved from the Network Service definition.
Save Participant/ Participant Linked	These check boxes are the same as the check boxes that appear in the *Properties Identification* dialog box. For more information, see the description of "Save Participant" on page 4-94.

4. Click **OK** to complete the participant definition.
   The participant is added to the On Going Conference, Reservation or the Reservation Template, depending on the conference/participant definition mode.

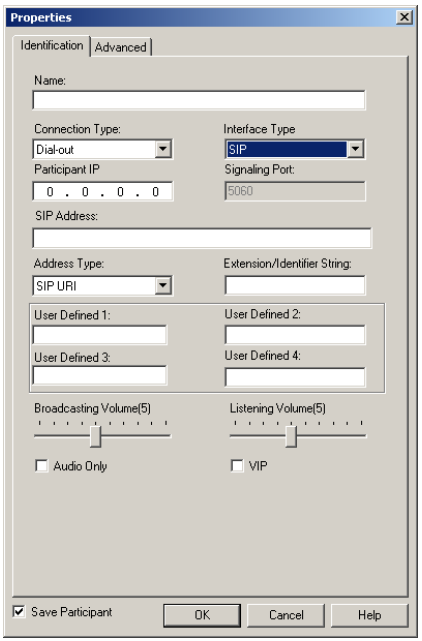
IP (H.323 and SIP) Participant Definition

The IP participant (endpoint) can be an H.323 or a SIP participant. Most of the parameters are common to both IP participant types.

To define a new IP participant:



H323 Participant Properties



SIP Participant Properties

1. Define the parameters relevant to the participant type:

Table 4-8: IP Participant Properties - Identification

Field/Option	Description
Participant IP	Enter the IP address of the participant's endpoint. • For **H.323** participants: • In a Dial-out connection, enter the IP address or alias of the endpoint to be called by the MCU. If you entered only an alias the gatekeeper can resolve the participant's alias into an IP address.

Table 4-8: IP Participant Properties - Identification (Continued)

Field/Option	Description
Participant IP (cont.)	• In a Dial-in connection, the participants IP address or alias are entered. The IP address or alias is used to identify and route the participant to the appropriate conference. • For **SIP** endpoints, *Participant IP* is optional as these participants are located by resolving their names into IP addresses by SIP proxy.
Signaling Port	Indicates the signaling port used for participant connection. • For H.323 the default port is 1720. • For SIP, the default port is 5060.
SIP Address **SIP Only**	Enter the endpoint address in the format: [user name]@[domain]. **Note:** The SIP URI adheres to URI rules: no spaces or special characters such as commas, quotation marks, inverted tags and so forth either in the user name or in the domain part.
Address Type **SIP Only**	Select the format in which the SIP address is written: • ***SIP URI*** - Uses the format of an E-mail address, typically containing a user name and a host name: *sip:[user]@[host]*. For example, sip:dan@polycom.com. • ***TEL URI*** - Used when the endpoint does not specify the domain that should interpret a telephone number that has been input by the user. Rather, each domain through which the request passes would be given that opportunity. As an example, a user in an airport might log in and send requests through an outbound proxy in the airport. If the users enters "411" (this is the phone number for local directory assistance in the United States), this number needs to be interpreted and processed by the outbound proxy in the airport, and not by the user's home domain. In this case, tel: 411 is the correct choice.

Table 4-8: IP Participant Properties - Identification (Continued)

Field/Option	Description
Alias Name **H.323 Only**	If you are using the endpoint's alias and not the IP address, first select the type of alias and then enter the endpoint's alias as registered with the gatekeeper. Enter the alias name using the naming conventions appropriate to its type (see following).
Alias Type **H.323 Only**	Each alias can be of a different type: • H.323 ID (alphanumeric ID) • E.164 (digits 0-9, *, #) • URL ID (URL style address) • Email ID (email address format) • Transport ID (IP address: port number) • Party Number (identical to the E.164 format) **Notes:** • Select the appropriate alias type before entering an alias name. • Although all types are supported, the type of alias is dependent on the gatekeeper's capabilities. The most commonly supported alias types are **H.323 ID** and **E.164**. Refer to your gatekeeper documentation for information on its supported alias types.
Extension/Identifier String	This is the DTMF string sent to the recording or other DTMF activated system; an outgoing DTMF operation initiated by the MCU. This is useful for identifying extensions associated with SIP users. Each type of recording system has a specific DTMF string structure, for example, when using the Prairie recording services. For more details, see the *MGC Manager User's Guide, Volume II, Chapter 9, "Recording".*

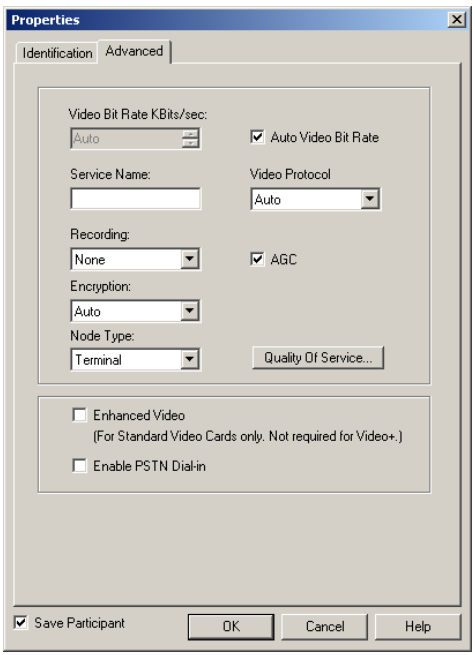
Table 4-8: IP Participant Properties - Identification (Continued)

Field/Option	Description
User Defined fields 1-4	In any or all of the four *User Defined* fields, enter general information for the participant, such as the participant's E-mail address, telephone number, company name, location, or any required information. The titles of the *User Defined* fields can be modified in the *Database Manager -> Defaults -> User Defined Defaults* and loaded to the MGC Manager application. For details, see Chapter 3. **Note:** The *User Defined* fields are displayed only if the *Show User Defined Fields in Participant Parameters* box is selected in the *Database Manager -> Defaults ->User Defined Defaults*.
Broadcasting Volume	You can control the volume of the audio transmitted from the participant to the conference (broadcasting volume), and from the conference to the participant (listening volume). To adjust the volume, move the slider. The volume scale is from 1 to 10, where 1 is the weakest and 10 the strongest volume. The volume of each endpoint's audio at connection time is set to 5. One movement of the volume slider increases or decreases the volume by one unit, equivalent to 3db.
Listening Volume	
Audio Only	Select this option to define the participant as an audio-only participant, with no video capabilities.
VIP	When checked, changes the participant's status to VIP, to distinguish participants who require special attention. **Note:** The VIP status can also be changed during the On Going Conference.
Save Participant	Select this option if you want to save this participant as a template in the User Defined template file or in the selected database group. **Note:** This check box appears only when you define a participant while creating a new reservation [template] in the User Template file or when defining a participant during an On Going Conference and a database group is selected as the source.

Table 4-8: IP Participant Properties - Identification (Continued)

Field/Option	Description
Participant Linked	Select this option to save the participant as a template in the database and link the participant to the Reservation template. The participant is assigned to the selected database Group. If this option is cleared, the participant is embedded in the Reservation template and his/her parameters are not saved in the database for future use. **Note:** This check box appears only when defining a participant during the definition of a Reservation template in the database.

2. Optional: Click the **Advanced** tab. The *Advanced* parameters definition may be skipped for most participants if the default settings are used. The *IP Participant Properties - Advanced* dialog box opens.



H323 and SIP Participant Advanced Properties

3. Define the following parameters:

Table 4-9: IP Participant Properties - Advanced

Field/Option	Description
Video Bit Rate Kbits/sec	This option is enabled when the **Auto Video Bit Rate** check box is cleared. It allows you to specify the participant's video transfer rate. When adding a new participant during an On Going Conference this option defaults to the conference setting. **Note:** It is recommended to use multiples of 100 kilobits per second.
Auto Video Bit Rate	Select this check box to use the Line Rate defined for the conference, or clear it to define the video rate for the participant. This check box is automatically selected (and cannot be cleared) when defining a new participant during an On Going Conference.
Service Name	Enter the name of the IP Network Service handling the call. Note that the system is case sensitive. If left blank, the default IP Network Service (H.323 or SIP depending on the Interface Type) is used.
Video Protocol	This option defaults to the conference setting when adding a new participant during an On Going Conference. Select the video compression standard: • ***Auto*** - Use the conference's Video Protocol settings and enable the dynamic adjustment of the Video Protocol. For more details, see "Defining Advanced Media Settings" on page 4-40. • ***H.261*** - The base video compression standard that is supported by all endpoints/participants. • ***H.263*** - A video compression standard that provides enhanced video quality. This standard is not supported by all endpoints. • ***H.264*** - A video compression standard that provides enhanced video quality especially in line rates of up to 384 Kbps. This standard is not supported yet by all endpoints.

Table 4-9: IP Participant Properties - Advanced (Continued)

Field/Option	Description
Video Protocol (cont.)	• ***H.264**** - A Polycom proprietary standard for video compression that improves video quality at a line rate lower than 384Kbps. **Note:** When the *Video Protocol* is set to **Auto** in the *Conference Properties - Settings* dialog box, this overrides the participant's Video Protocol settings, because *Auto* enables the dynamic mode in which the video settings are forced by the MCU. In such a case, the system first tries to connect the participant using the H.264 video protocol. Only if the endpoint does not support H.264, the system tries to connect the participant using H.263 or H.261. If the conference video protocol is set to **H.264** or **H.263** and the endpoint does not support this protocol, the participant is connected as Secondary (audio only).
Recording	Designate the IP participant as an audio recording port connected to an external recording device. • ***None*** - The participant is not connected to an external recording device. • ***Dial up*** - The participant is used as the recording port to an external device. For more details, see the *MGC Manager User's Guide, Volume II, Chapter 9, "Recording"*
AGC	The Auto Gain Control (AGC) mechanism regulates audio noise and volume by balancing the received signal to all participants. Different endpoints and phones produce specific source noises and volume. To provide a constant output amplitude, AGC can be applied to all incoming audio streams prior to mixing, thereby dynamically adjusting the amplification of the input signal. AGC is automatically enabled for all participants. Clear this check box to disable this option for the participant.

Table 4-9: IP Participant Properties - Advanced (Continued)

Field/Option	Description
Encryption	Media information can be encrypted using an AES 128 algorithm. The *Encryption* options are affected by the settings of the participant level flag in the system.cfg. Select the appropriate encryption setting for the participant: • ***Auto*** - The conference encryption setting *(encrypted/non-encrypted)* is applied to the participant. In this mode, the participant connects as encrypted only if the conference is defined as encrypted. • ***Off*** - The participant joins the Conference as *non-encrypted*. • ***On*** - The participant joins the Conference as *encrypted*. **Note:** SIP protocol does not support this type of encryption. For more details, about encryption see the *MGC Manager User's Guide Volume II, Chapter 1*.
Node Type	Select the node type from the list: • ***Terminal*** — The default. This setting is applicable for all settings that are not DTMF enabled cascaded conferences. • ***MCU*** — Select this setting for a dial-out participant in a DTMF enabled cascaded conference. For more details, see the *MGC Manager User's Guide Volume II, Chapter 1*.
Quality Of Service	Click this button to modify the QoS setting for this participant. If no changes are made the definitions are taken from the Network Service definition. For details see *"Quality of Service for IP Participants" on page 4-110*.

Table 4-9: IP Participant Properties - Advanced (Continued)

Field/Option	Description
Enhanced Video	This option is applicable to Standard Video cards and is not required for participants connecting to conferences running on Video+ cards (that provide high quality video combined with high line rates using one video port instead of two). The MGC unit can provide high quality video (30 frames per second for incoming and outgoing video streams) for line rates up to T1/ E1 in Transcoding and Continuous Presence conferences. This is done by allocating two video ports to the participant. One video port is used for encoding, while the other is used for decoding the incoming video stream. Select this option to enable the high quality video feature for the participant. **Note:** • To work with 30 frames per second, the High Frame Rate flag in the system.cfg must be enabled. • To work with bit rates higher than 768 Kbps, the High Bit Rate flag in the system.cfg must be enabled. • This option is disabled for Video Switching conferences.
Enable PSTN Dial-in	For internal use only.

4. Click **OK** to complete the definition of the H.323 or SIP participant. The participant is added to the On Going Conference, Reservation or to the Reservation Template, depending on the conference definition mode.

Quality of Service for IP Participants

Quality of Service (QoS) is a collective measure of the level of service delivered to a customer. QoS is the level of assurance for an application that the network can meet its service requirements. The QoS parameters may be defined at the participant level and at the network services level. The participant properties setting has priority over the network services level.

For more details on services configuration, see the *MGC Manager Administrator's Guide, Chapter 3, "Defining Network Services".*

In the *Participant Properties* dialog box, you can enable or disable QoS for H.323 or SIP participants, or allow the values defined in the Network Service.

To define Quality of Service for a H.323 or a SIP participant:

1. In the *Participant Properties - Advanced* dialog box, click the **Quality of Service** button.
   The *Participant Properties - IP Quality Of Service* dialog box opens.

2. Define the following parameters:
3. Click **OK** to complete the QoS definition for the H.323 or SIP participant. In the *Participant Properties - Advanced* dialog box, click **OK** to apply the settings.

Table 4-10: IP Participant Properties - IP Quality of Service

Field/Option	Description
IP Quality of Service	QoS refers to the media transfer portion of a point to point or point to multipoint call. Select the QoS option: • ***Disable*** - QoS is not implemented for this participant. • ***Enable*** - To modify the participant QoS properties. • ***From Service*** - (Default) To use the QoS settings of the *IP Network Service* that handles the call.
DiffServ/ Precedence	Select the QoS mechanism for prioritizing traffic on the IP network: • ***DiffServ*** • ***Precedence*** - (enables additional parameters) For more details, refer to the *MGC Administrator's Guide, Chapter 3, "Defining Network Services"*.
Audio and Video	You can prioritize audio and video IP packets to ensure that all participants in the conference hear and see each other clearly. Select the desired priority to ensure highest quality and lowest latency. The recommended priority for both audio and video is 4 to ensure that the delay for both packets is the same and audio and the video packets are synchronized.
ToS	Type of Service (TOS) defines optimization tagging for routing the conferences audio and video packets. Select the ToS (Type of Service) method that defines the route used by LAN router to transfer the packets. • ***Delay*** - The recommended default for video conferencing; prioritized audio and video packets tagged with this definition are delivered with minimal delay (the throughput of IP packets minimizes the queue sequence and the delay between packets). • ***None*** - No optimization definition is applied. This is a compatibility mode in which routing is based on Precedence priority settings only. Select *None* if you do not know which standard your router supports.

5

Monitoring Conferences

You can monitor On Going Conferences and perform various operations while conferences are running.

Three levels of monitoring are available with the MGC Manager:

- *General Monitoring* - You can monitor the general status of all On Going Conferences and their participants in the MGC Manager main window.
- *Conference Level Monitoring* - You can view additional information regarding a specific conference and modify its parameters if required, using the *Conference Properties* option.
- *Participant Level Monitoring* - You can view detailed information on the participant's status, using the *Participant Properties* option. During attended conferences you can monitor the status of the participants waiting in the Participants Queue.

This chapter describes the status indicators and icons and the various monitoring options and methods according to these levels and according to the type of participant or the type of connection to the conference. This chapter also includes a description of gateway sessions monitoring.

General Monitoring

You monitor a conference to keep track of its participants and its progress. When monitoring a conference, you can check whether all its participants are correctly connected and whether errors and faults have occurred.

The MGC Manager allows operators to monitor several On Going Conferences from the same or different MCUs simultaneously. The On Going Conference information is easily available and clearly represented.

Participants in IVR enabled conferences can be in one of the following stages: Greeting (Welcome), Attended, On Hold, and Conferencing.

Using an IVR service, the participant is guided to the conference using a voice-prompt menu and DTMF input from the participant endpoint. The connection is automated, but an Operator is at hand to assist the caller.

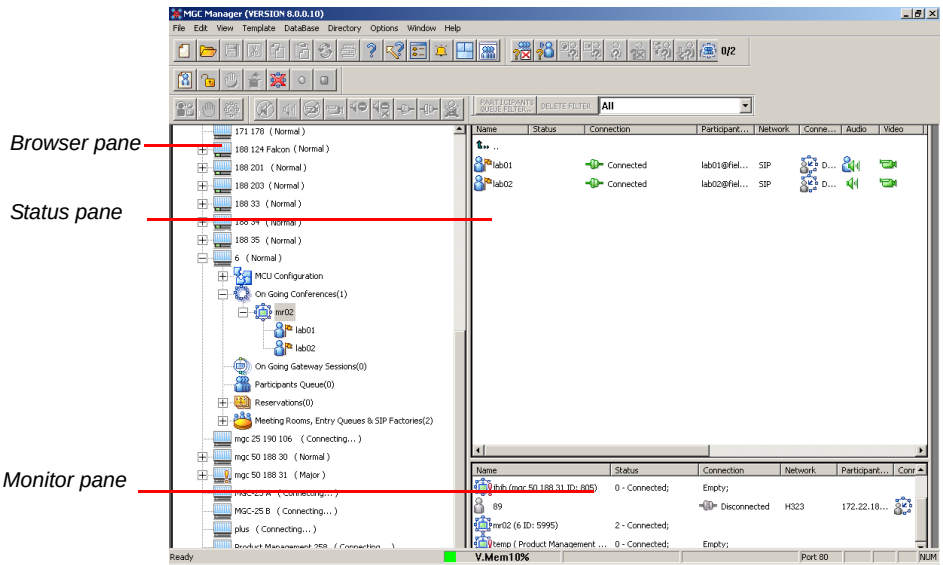
In IVR enabled conferences set as Attended with Operator assistance, the Operator controls the participant connection to the conference moving the participant from one stage to another. The move is performed either interactively using drag-and-drop, using the right-click pop-up menu, or the appropriate buttons on the Attended Participant Conference toolbar. Special icons are used to indicate the participant status in an attended conference.

- In the *Greeting* state, the participants connect to the Entry Queue or directly to an IVR-enabled conference where they hear a welcome message (and view a welcome video slide) and are guided through their connection process using voice prompts. In the Entry Queue, participants are routed to the destination conference according to conference Numeric ID they enter. Participants connecting directly to an IVR-enabled conference are allowed in to the conference once they have entered the appropriate conference or chairperson password. If the Entry Queue or the IVR-enabled conference is set to Attended mode (The Entry Queue service or the IVR service is configured to “wait for Operator Assistance”), the participants are moved to the Participants Queue where they wait for the operator to connect them to the conference.
- In the *Attended* state, the participant is moved to the Operator conference, where after a short conversation with the participant, the Operator moves the participant to the appropriate conference (Home conference) or places the participant on hold.

- In the *On Hold* state, the participant is placed on hold where she or he hears background music (and view the same welcome video slide) and wait for the operator's assistance. Participants are also placed on hold and moved to the participants queue when they enter the wrong conference Numeric ID (while in the Entry Queue) or the wrong password where they wait for the operator to connect them to the conference. This option must be enabled in the Entry Queue or the IVR Service and if there is an Operator conference running on the MCU.
- In the *Conferencing* state, the participant is connected to the conference. Operator assistance can be requested via DTMF codes during the On Going conference if it is configured in the IVR Service assigned to the conference.

Using the Main Window Panes for Monitoring

You can view current statuses in the MGC Manager main window panes and tables that show conference, connection, media and participant indicators.



You can adjust both the columns and the rows in the *Monitor* and the *Status* pane tables to suit your monitoring priorities.

- To modify the order of columns, select and drag the column labels to the desired location.

- To sort items in a column, click a column heading once for descending order, and click again to sort the items in ascending order.

Listing Conference Properties

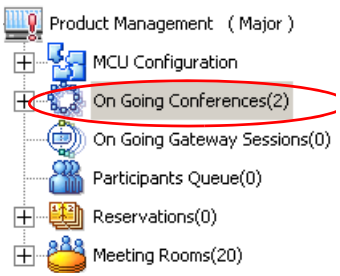
The properties of an On Going Conference can be viewed in the *Status* pane or in the *Monitor* pane of the main window. The *Status* pane enables you to view the properties of a single conference or list all On Going Conferences (without participant details), while the *Monitor* pane enables you to view several conferences simultaneously, and in detail. This pane displays additional parameters and allows you to filter the information, for example to display only those participants who require the operator's assistance.

Viewing On Going Conference Status

In the On Going Conferences list, you can view all the conferences currently running on the MCU. You can view the statuses of the conferences either by expanding the On Going Conferences tree or by clicking the On Going Conferences icon. The system simultaneously lists all the activated conferences and Entry Queues.

To display conference information in the Status pane:

1. In the MGC Manager window *Browser* pane, expand the *MCU* tree.
2. Expand the *On Going Conferences* tree to view the list of currently running conferences.



The On Going Conferences and the details (properties) of each conference are listed in the *Status* pane table, providing quick and easy access to such information as conference dial-in numbers, H.323 service prefixes, conference numeric ID, and passwords.

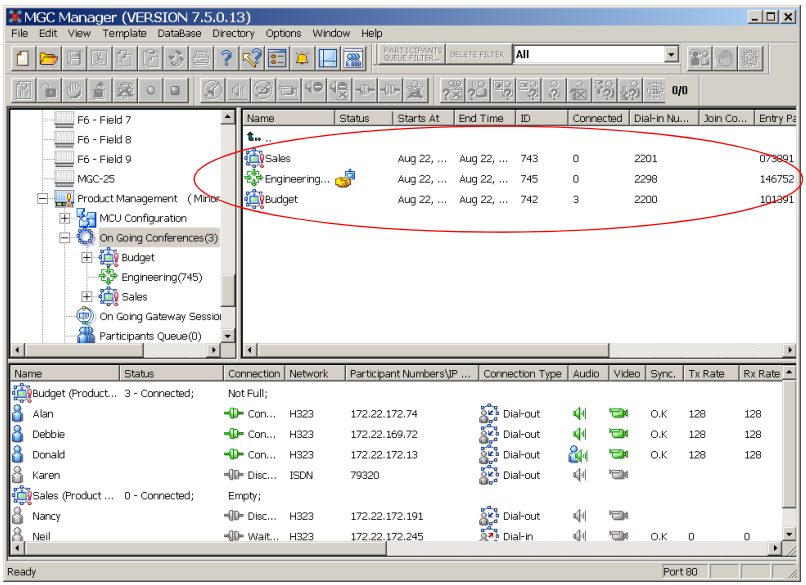

MGC Manager (VERSION 7.5.0.13)
File Edit View Template DataBase Directory Options Window Help
F6 - Field 7
F6 - Field 8
F6 - Field 9
MGC-25
Product Management
MCU Configuration
On Going Conferences(3)
Budget
Engineering(745)
Sales
On Going Gateway Sessio
Participants Queue(0)
Name Status Starts At End Time ID Connected Dial-in Nu... Join Co... Entry Pa
Sales Aug 22, ... Aug 22, ... 743 0 2201 073991
Engineering... Aug 22, ... Aug 22, ... 745 0 2298 146752
Budget Aug 22, ... Aug 22, ... 742 3 2200 101391
Name Status Connection Network Participant Numbers\IP ... Connection Type Audio Video Sync. Tx Rate Rx Rate
Budget (Product... 3 - Connected; Not Full;
Alan Con... H323 172.22.172.74 Dial-out O.K 128 128
Debbie Con... H323 172.22.169.72 Dial-out O.K 128 128
Donald Con... H323 172.22.172.13 Dial-out O.K 128 128
Karen Disc... ISDN 79320 Dial-out
Sales (Product ... 0 - Connected; Empty;
Nancy Disc... H323 172.22.172.191 Dial-out
Neil Wait... H323 172.22.172.245 Dial-in O.K 0 0
Ready
Port 80

Table 5-1 describes the information displayed about the conferences in the main window *Status* pane. The columns are listed in the default order, however you can rearrange the columns, see "Using the Main Window Panes for Monitoring" on page 5-3.

Table 5-1: On Going Conference - Status Pane Columns

Column Name	Description
Name	The name of the conference and an icon indicating the conference type and status. For a detailed description of icons and conference types see Table 5-2 on page 5-10.
Status	Additional information about the conference. For a detailed description see *Table 5-2 on page 5-10*.
Connection	The connection status of the conference. For a detailed description, see *Table 5-2 on page 5-10*.

Table 5-1: On Going Conference - Status Pane Columns (Continued)

Column Name	Description
Starts At	The time the conference started.
End Time	The scheduled end time of the conference.
ID	A sequential ID number assigned to the conference by the system, for use by the Call Detail Record (CDR) utility.
Connected	The number of participants currently connected to the conference.
Dial-in Number	The dialing number that participants can use to access the conference via an ISDN line.
Join Conference	The names of conferences the operator has joined: • *In an Operator Conference* - indicates the name of the conference joined by the operator. • *In an On Going Conference* - indicates the name of the operator who joined the conference (the Operator conference name is identical to the operator's login name).
Entry Password	The password to be used by participants to enter the conference.
Chairperson Password	The password to be used by a participant to enter the conference as the chairperson.
Numeric ID	The unique-per-MCU Conference Numeric ID as assigned by the operator or the system. This number can be used by IP participants as a part of a dialing string, when accessing the conference.
H323 Service Prefix	The IP Network Service prefix that can be used as part of the dialing string by IP endpoints.
Encryption	Displays whether the conference is encrypted at the conference level.

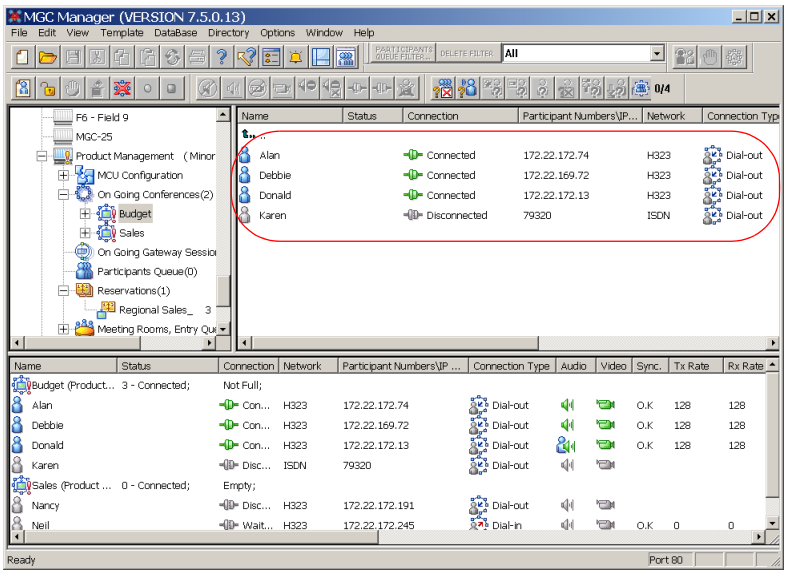
Listing On Going Conference Participants in the Status Pane

You can view the detailed status information of the participants in an On Going Conference.

To display participant information in the Status pane:

1. Expand the *MCU* tree to list its options.
2. Expand the *On Going Conferences* tree to view the list of currently running conferences.
3. In the *On Going Conferences* list, click the icon of the conference whose participants you want to view in the *Status* pane.

   The participant details are displayed in the *Status* pane table. You can adjust the columns order to suit your monitoring priorities.

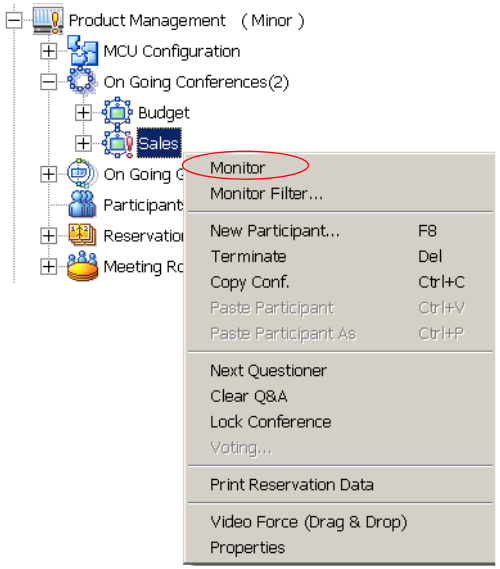

MGC Manager (VERSION 7.5.0.13)
File Edit View Template DataBase Directory Options Window Help
F6 - Field 9
MGC-25
Product Management (Minor
MCU Configuration
On Going Conferences(2)
Budget
Sales
On Going Gateway Sessio
Participants Queue(0)
Reservations(1)
Regional Sales_ 3
Meeting Rooms, Entry Qu
Name Status Connection Participant Numbers\IP... Network Connection Typ
Alan Connected 172.22.172.74 H323 Dial-out
Debbie Connected 172.22.169.72 H323 Dial-out
Donald Connected 172.22.172.13 H323 Dial-out
Karen Disconnected 79320 ISDN Dial-out
Name Status Connection Network Participant Numbers\IP ... Connection Type Audio Video Sync. Tx Rate Rx Rate
Budget (Product... 3 - Connected; Not Full;
Alan Con... H323 172.22.172.74 Dial-out O.K 128 128
Debbie Con... H323 172.22.169.72 Dial-out O.K 128 128
Donald Con... H323 172.22.172.13 Dial-out O.K 128 128
Karen Disc... ISDN 79320 Dial-out
Sales (Product ... 0 - Connected; Empty;
Nancy Disc... H323 172.22.172.191 Dial-out
Neil Wait... H323 172.22.172.245 Dial-in O.K 0 0
Ready
Port 80

Listing On Going Conference Participants in the Monitoring Pane

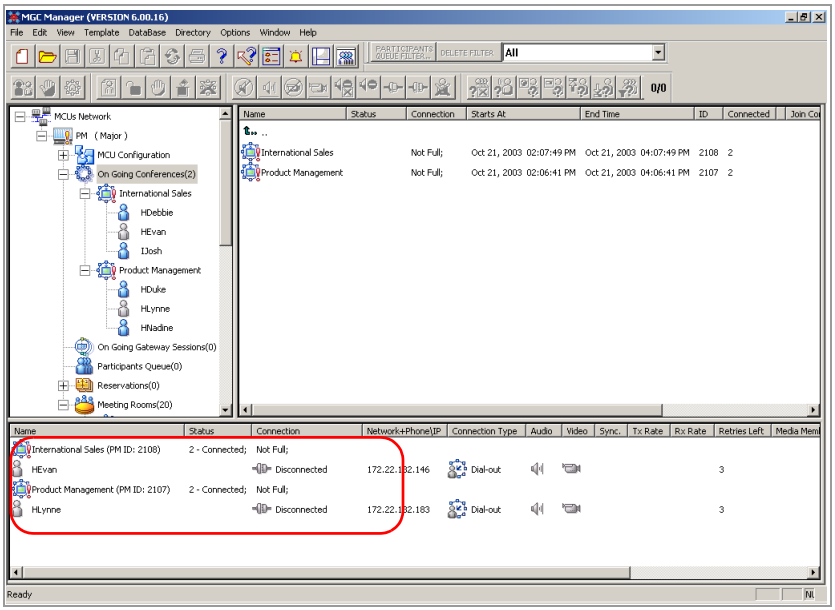
You can display several conferences and their participants in the *Monitoring* pane to monitor both the conferences and their participants in one window.

To display participant information in the Monitor pane:

1. In the *Browser* pane, expand the *On Going Conferences* list.
2. Right-click the icon of the conference to monitor, and then click **Monitor** to view the conference and its participants in the *Monitor* pane.



The conference details are listed in the *Monitor* pane. Each row in the *Monitor* pane table represents a conference or a participant. Each column contains status information about the item that is being monitored.


MGC Manager (VERSION 6.00.16)
File Edit View Template DataBase Directory Options Window Help
MCUs Network
PM (Major)
MCU Configuration
On Going Conferences(2)
International Sales
HDebbie
HEvan
IJosh
Product Management
HDuke
HLynne
HNadine
On Going Gateway Sessions(0)
Participants Queue(0)
Reservations(0)
Meeting Rooms(20)
Name Status Connection Starts At End Time ID Connected
International Sales Not Full; Oct 21, 2003 02:07:49 PM Oct 21, 2003 04:07:49 PM 2108 2
Product Management Not Full; Oct 21, 2003 02:06:41 PM Oct 21, 2003 04:06:41 PM 2107 2
Name Status Connection Network+Phone\IP Connection Type Audio Video Sync. Tx Rate Rx Rate Retries Left
International Sales (PM ID: 2108) 2 - Connected; Not Full;
HEvan Disconnected 172.22.132.146 Dial-out 3
Product Management (PM ID: 2107) 2 - Connected; Not Full;
HLynne Disconnected 172.22.132.183 Dial-out 3
Ready

To view the participants of another conference, repeat step 2.

For each monitored conference, the system displays the conference status and lists the defined and undefined participants.

Monitor Pane Information

The list of participant details that is displayed in the Status pane is a partial list of the more commonly monitored details. The *Participant Properties* dialog box contains more extensive participant information than that available in the Monitor pane.

Table 5-2 lists the Monitor pane columns and the information that is displayed in each column. Columns are listed in their default order. Each column can include an icon, textual indication or both.

Table 5-2: On Going Conference - Monitor Pane Columns

Column Name	Icon	Indication	Description
Name	The name of the On Going Conference or participant, and an icon indicating the conference and participant type and status.		
	Conference Indicators		
			Video conference - In this type of conference, participants use audio and video channels to connect. This conference may include both Audio Only and video participants.
			Audio Only conference - This type of conference can be run on an Audio Only MCU (Voice Plus) or on a unified MCU. **Note:** Audio Only conferences are described in the *MGC Manager User's Guide, VoicePlus Edition*.
			Operator conference - Audio Only or video. Allows the operator and a single participant to talk in a side conference without disturbing the On Going Conference. For this purpose, the participant is moved to the Operator conference from the Entry Queue, IVR Queue, Welcome Queue, Greet and Guide or On Going Conference.

Table 5-2: On Going Conference - Monitor Pane Columns (Continued)

Column Name	Icon	Indication	Description
Name (cont.)			*End-of-conference alert* - Indicates that the conference is about to end.
			Faulty audio or video conference - An exclamation point next to the conference icon indicates that the conference has a problem and requires operator's assistance. The cause of the problem is listed in the Connection column.
			Secure conference - A conference has been secured by the chairperson to prevent outside participants and operators from joining, monitoring or controlling it. For all secure conference statuses, see Table 5-7 on page 5-29.
	Participant Indicators		
	Dial-in participants who were undefined prior to the conference start, are named using the conference name and a sequential number that appears between brackets.		
			Standard participant - Any dial-in or dial-out participant connected to the conference.
			Chairperson/ Leader - The participant defined as the conference chairperson/leader. The chairperson can manage the conference using touch-tone signals (DTMF codes), for example lock or unlock the conference to dial-in participants, initiate a voting session, be the exclusive speaker, mute all other participants.
			Lecturer - The participant defined as the conference Lecturer.

Table 5-2: On Going Conference - Monitor Pane Columns (Continued)

Column Name	Icon	Indication	Description
Name (cont.)			*Operator* - The participant defined as the MGC Manager Operator. The operator manages an On Going Conference, connects and disconnects participants, moves participants between conferences, assists participants, and more.
			VIP participant/VIP chairperson - A participant or a chairperson defined as a VIP, for preferential assistance. The VIP status does not change the role of the participant.
			Questioner - A participant who is currently waiting in the Question-and-Answer queue.
			Current questioner - The current questioner in a Question-and-Answer session.
	(Gray)		*Disconnected participant* - When any type of defined participant is disconnected from the conference, the respective icon is disabled.
			Faulty connected or Attended participant - An exclamation point next to the icon indicates that the participant has a problem and requires operator's assistance. The cause of the problem is listed in the Connection column.

Table 5-2: On Going Conference - Monitor Pane Columns (Continued)

Column Name	Icon	Indication	Description
Status	Displays additional information about On Going Conferences and their participants, and the number of connected participants.		
		Locked conference	The conference is locked to dial-in participants.
		Lecture Mode	The conference is set to Lecture Mode. For details, see Chapter 10, "Lecture Mode Definition" on page 10-2.
		Presentation Mode	The conference is set to Presentation Mode. For details, see Chapter 10, "Presentation Mode Monitoring" on page 10-12.

Table 5-2: On Going Conference - Monitor Pane Columns (Continued)

Column Name	Icon	Indication	Description
		On Hold	The conference is on hold; all participants hear background music and, in a video conference, view a video slide.
		On Hold and Locked	The conference was placed on hold and is locked to dial-in participants.
		IVR Service	A video conference with an enabled IVR Service.
			Participant is in the Entry Queue - The participant is connected to the MCU and has entered the Entry Queue or the IVR queue.
		Voting	Voting session is in progress, where participants express their preference on a set of choices using the touch-tone keypad.
		Exclusive Speaker	A text indication that this participant is the conference's Exclusive Speaker; in this mode, all other participants are automatically muted. An icon is displayed in the *Audio* column.
		Connected	Lists the number of participants currently connected to the conference.

Table 5-2: On Going Conference - Monitor Pane Columns (Continued)

Column Name	Icon	Indication	Description
Connection	Indicates the connection status of the conference or a participant. Additional statuses are available during a Greet and Guide conference.		
	Conference Connection Status		
		No Indication	The conference is running smoothly.
		Empty	No participant was defined for this conference, or none of the defined participants are connected.
		Not Full	Not all the participants who were defined for this conference, are connected.
		Faulty Connection	Participants are connected, but the connection is problematic, therefore the conference cannot run normally.

Table 5-2: On Going Conference - Monitor Pane Columns (Continued)

Column Name	Icon	Indication	Description
Connection (cont.)		*Single Participant*	Only one participant is defined, or only one of the defined participants is connected
		Resource Deficiency	The resources currently installed in the MCU, such as audio cards, cannot handle the requested conference because it exceeds its limitations.
		Bad Resources	A fault occurred in one of the cards.
	Participant Indicators		
		Connected	The participant is successfully connected to the conference.
	(Gray)	*Disconnected*	The participant is disconnected from the conference. This status may occur when the participant is disconnected from the On Going Conference either by the operator or from the participant side.
		Connecting	Displayed during the connection process of a participant to the conference.
		Stand By	In a conference that was set to *Dial-out Manually*, the dial-out participant is waiting to be connected to the conference by the operator.
		Waiting for Dial-in	The system is waiting for the defined dial in participant to dial into the conference.

Table 5-2: On Going Conference - Monitor Pane Columns (Continued)

Column Name	Icon	Indication	Description
Connection (cont.)		*Partial connection*	The connection process is not yet complete; the video channel has not been connected.
		Faulty Connection	The participant is connected, but problems occurred in the connection, such as synchronization loss.
		Secondary Connection	The participant is connected without video (audio only). This status occurs when the participant's endpoint does not support the video parameters required by the conference.
		Noisy Line	The line of this participant was detected by the system as noisy. **Note:** This indicator is used only when the automatic noisy line detection option was enabled in the "system.cfg".
Network		ISDN, H.323, SIP, MPI or T1-CAS	Lists the type of Network used by the participant to connect to the conference.
Participant Numbers\ IP Address\ SIP Address	Displays the participant and MCU phone numbers or IP address/ alias, depending on the supported network and connection type. In dial-in connection, displays the CLI number (ISDN) or IP address/alias of the participant calling the MCU (marked by the letter P) and the MCU number or IP address/alias dialed by the participant (marked by the letter M). In dial-out connection displays the dialed number (ISDN) or IP address/alias (H.323) of the participant.		

Table 5-2: On Going Conference - Monitor Pane Columns (Continued)

Column Name	Icon	Indication	Description
Connection Type	Identifies the defined type of participant's connection to the conference.		
		Dial-out	The MCU (conference) dials to the participant.
		Dial-in	The participant calls the MCU (conference).
		Direct connection	Leased Line connection (ISDN only).
Audio	Indicates whether the participant's audio is connected and the status of the audio channel. For details see Table 5-4.		
Video	Indicates whether the participant's video channel is connected, and the status of the video connection. For details see Table 5-5.		
Sync.	Indicates whether the participant's site is synchronized. For H.323 participants, indicates the general synchronization status of Video Switch, Protocol Sync Loss and Video Intra Sync. • ***OK*** - there is no synchronization problem. • ***l-sync loss*** - there is a general synchronization problem with the MCU. • ***r-sync loss*** - there is a general synchronization problem with the participant site. • ***l-video sync loss*** - there is a video synchronization problem with the MCU. • ***r-video sync loss*** - there is a video synchronization problem with the participant site. To see the number of times that the sync loss problem occurred (either in the remote or the local site) see the *Sync Loss Cont* and *V Sync Loss Count* columns.		
Tx Rate	The line rate in which data sent *from the MCU* is received by the endpoint. For H.323 participants indicates the total line rate of all the channels (agreed rate) in which data sent from the MCU is received by the endpoint.		

Table 5-2: On Going Conference - Monitor Pane Columns (Continued)

Column Name	Icon	Indication	Description
Rx Rate	The line rate in which data sent *from the endpoint* is received by the MCU. For H.323 participants indicates the total line rate of all the channels (agreed rate) in which data sent from the endpoint is received by the MCU.		
Retries Left	Indicates the remaining number of attempts the system makes to reach disconnected participants and connect them to the conference. You set this parameter in the *Options* menu *Communication* option. Once the participant connects to the conference, the number of retries is set to 0.		
Media Member	Identifies the participant's media types: Audio, Video and Data.		
Video Sources	Identifies the participant who is viewed by other conference participants. In a Video Switching conference, the current video source is the speaker of this conference. In a Continuous Presence conference - depending on the Video Layout - several participants may be viewed simultaneously.		
Channels #	Identifies the number of channels that are used for connecting this participant. **Note:** This parameter is not displayed for H.323 participants.		
Aggregation	Displays the aggregation method of the channels that are used for connecting this participant: H.221, Bonding or Multi Rate. **Note:** This parameter is not displayed for H.323 participants.		
ID	The participant ID as assigned by the system.		
Sync Loss Count	For ISDN/ATM/MPI participants, indicates the general synchronization status. R indicates the endpoint (remote) status while L indicates the MCU status. A dash "– "indicates that there is no sync loss problem, while numbers indicate the number of times that the sync loss problem occurred at the remote or the local site.		

Table 5-2: On Going Conference - Monitor Pane Columns (Continued)

Column Name	Icon	Indication	Description
V Sync Loss Count	Indicates the video synchronization status. R indicates the endpoint (remote) status while L indicates the MCU status. A dash "–" indicates that there is no sync loss problem, while numbers indicate the number of times that the video sync loss problem occurred at the remote or the local site.		
Disconnection Cause	Displays the disconnection cause for a participant who is disconnected from the conference. For the list of disconnection causes, see Appendix A.		
Q&A Position	Indicates the position held by the participant in the Q&A Queue: "1" being the next to speak, "2" being second up, and so on. This information is cleared when the participant begins to speak.		
Q&A Waiting Time	Displays the total time spent by the participant waiting in the Q&A Queue. This information is cleared when the participant begins to speak.		
Last Vote	During a voting session, displays the last vote that the selected participant entered (using a DTMF code).		
Sub Conference Name	Indicates whether the participant is in an Invite Session. The Invite option is available in Video or Audio Only Conferences and enables the chairperson or user, depending on System settings, to dial-out (during an On Going Conference) to a participant inviting them to join. Displays "Invite" for the chairperson and the invited participant.		

Additional Participant Statuses

Table 5-3 lists additional participant icons that are displayed when the participant is connected to an IVR-enabled conference. If none of these statuses occur, the *Status* column in the Status pane remains empty.

Table 5-3: Participant in IVR-enabled Conference Status Icons

Icon	Description
	The participant is connected to the MCU and has entered the Entry Queue or the IVR queue.
	The participant was moved to the Operator conference and is being assisted by the operator.
	The participant has requested the operator's assistance.
	The participant has requested the operator's assistance for the conference. Usually this means that the operator is requested to join the conference.
	The participant was placed on hold - is not currently taking part in any conference. While on hold, the participant hears background music and (in video conferences) views the *Welcome* slide.

Participant's Audio Status

Table 5-4 lists icons that indicate the current audio status of the participant.

Table 5-4: Participant Audio Status Icons

Icon	Description
(Green)	The audio channel of the participant is connected.
(Gray)	The audio channel is disconnected.
	This participant is the current conference speaker.
	This participant is the conference's Exclusive Speaker; in this mode, all other participants are automatically muted.
	Transmission of audio from the conference to the participant is blocked (video only conferences).
	The audio channel of the participant is muted by the participant (from the endpoint).
	The audio channel of the participant is muted by the participant and by the MCU.
	The audio channel of the participant is muted by the participant. Audio transmission from the conference to the participant site is blocked (video only conferences).
	The audio channel of the participant is muted by the operator.
	The audio channel of the participant is muted by the operator. Audio transmission from the conference to the participant site is blocked (video only conferences).
	The audio channel of the participant is muted by the participant and the operator.

Table 5-4: Participant Audio Status Icons (Continued)

Icon	Description
	The audio is muted by the participant and by the operator. Audio transmission from the conference to the participant site is blocked (video only conferences).
	The audio channel of the participant is muted by the operator and the MCU.
	The audio channel of the participant is automatically muted by the MCU. (Exclusive Speaker mode, Lecture Show).
	The audio channel of the participant is automatically muted and blocked by the MCU. Audio transmission from the conference to the participant site is blocked (video only).
	The audio channel of the participant is muted by the participant and by the MCU. Audio transmission from the conference to the participant is blocked (video only).
	The audio channel of the participant is muted by the operator and by the MCU. Audio transmission from the conference to the participant is blocked (video only).
	The audio channel of the participant is muted by the participant, operator and the MCU.
	The audio channel of the participant is muted by the participant, the operator, and the MCU. Audio transmission from the conference to the participant is blocked (video only).

Participant's Video Status

Table 5-5 lists icons that indicate the current video status of the participant.

Table 5-5: Participant Video Status Icons

Icon	Description
(Green)	The video channel of the participant is connected.
(Gray)	The participant is disconnected from the video conference.
(Gray)	The video channel could not be connected, therefore the participant is connected as Secondary (audio only).
	The video channel is muted by the participant from the endpoint.
	The video channel is muted by the operator.
	The video channel is muted by the participant and by the operator.
	The video channel is muted by the MCU (Lecture Show).
	The video channel is muted by the participant and the MCU (Lecture Show).
	The video channel is muted by the operator and the MCU (Lecture Show).
	The video channel is muted by the participant, the operator and the MCU (Lecture Show).

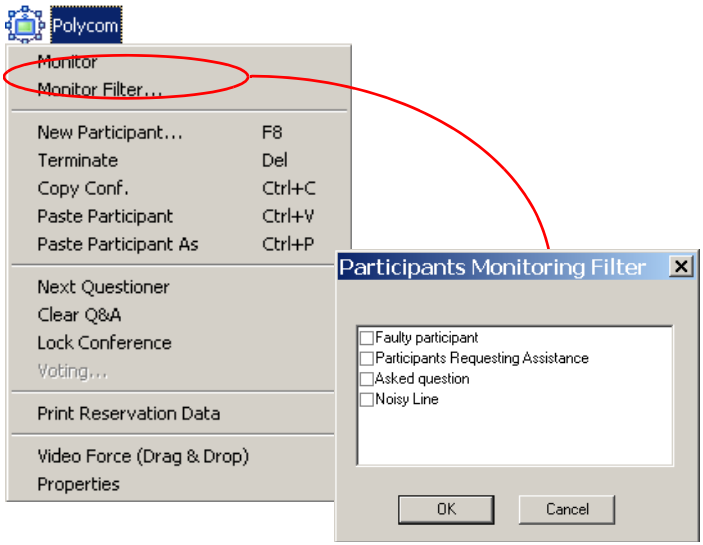
Monitor Filter

Using the *Monitor Filter* feature, you can select to view only those participants who have connection problems or require the operator's assistance. Participants may need assistance when:

- they are unable to connect to the conference
- manual dial-out is selected for a conference
- they have requested help
- they were placed on hold
- the line is noisy
- they are waiting in the Question and Answer queue

To display only those participants who require your attention:

1. Expand the *On Going Conferences* list.
2. Right-click the icon of the conference whose participants you want to monitor, and then click **Monitor Filter**.



The *Participants Monitoring Filter* dialog box opens.

3. Select the check boxes to indicate the participant statuses that you want to monitor. Clear the check boxes of the participant statuses that you do not want to monitor. You can request to monitor any or all options.

Table 5-6 describes the available categories of participant status that you can filter and view in the *Monitor* pane.

Table 5-6: Participant Monitoring Filters

Filtering Option	Description
Faulty Participant	Participants who have problems connecting to the conference, or cannot connect their video channel (join the conference as Secondary), or whose endpoint has lost its synchronization.
Participants Requesting Assistance	Participants who have requested the operator's assistance and are waiting to be assisted. In Attended conferences, this option also includes the participants who have to wait for the operator's assistance to connect to the conference.
Asked Question	Participants who are waiting in the Q&A queue.
Noisy Line	Participants whose audio channel is detected as noisy. The system uses a special algorithm to identify the endpoints that add background noise to the conference. Noise on a line can be caused by a variety of sources ranging from background noise, faulty equipment and noises emanating from the line itself. **Note:** The Noisy Line Detection feature is enabled/ disabled in the "system.cfg" by defining the detection sensitivity. For more information, see "Noisy Line Detection and Automatic Muting" on page 5-33

Monitoring All Conferences

The system can be configured to monitor all conferences according to the last *Monitoring Filter* that was set for any conference in the MGC Manager. When this feature is enabled, the system automatically displays all the conferences and all the participants that require the operator's attention, in the *Monitor* pane.

To toggle between automatic and manual monitoring:

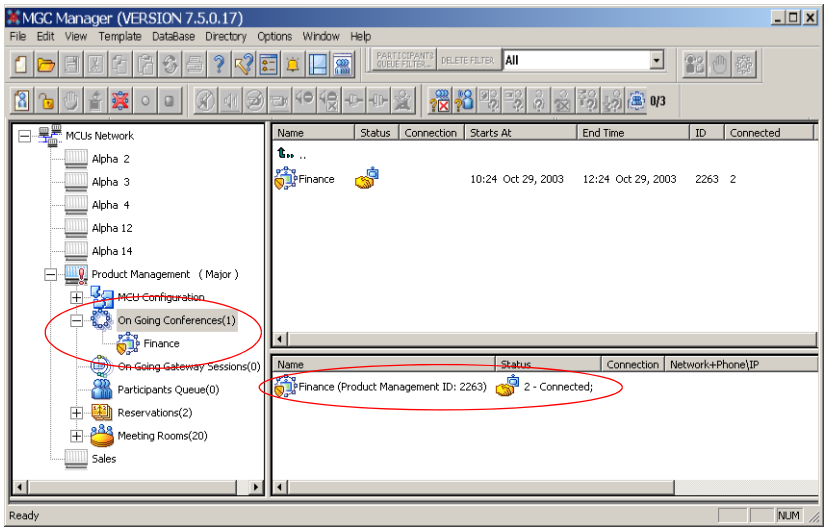
- On the *Options* menu, click **Monitor All** to activate automatic monitoring.

A check mark next to *Monitor All* indicates that the option is activated. Each click of the *Monitor All* option enables or disables this option.

Secure Conference Mode

Enabling the *Secure* mode locks the conference and prevents participants and operators, from joining the conference. A secure conference cannot be monitored or controlled in any way. While a conference is in the Secure mode, the operator cannot view the participants list or any other conference properties, but can manually terminate it.

The conference chairperson can enable or disable the *Secure* mode from the DTMF input device (touch-tone telephone or the endpoint's remote control), using the appropriate DTMF code (the default code is #70). During the secure conference, the chairperson and participants can perform various operations, such as voting and Q&A sessions, via their DTMF input device using the appropriate DTMF codes. However, because secure conferences cannot be monitored, these operations or status changes are not displayed in the MGC Manager *Monitor* pane. A special icon is used to indicate that the conference is in Secure mode.



Secure Conference Icons

Table 5-7 lists the icons and definitions that indicate the current status of a Secure conference.

Table 5-7: Secure Conference Status Icons

Icon	Indication	Description
	Secure conference	The (audio only or video) On Going Conference is in the Secure mode; the conference properties and the participants list are hidden.
	Faulty secure conference	An exclamation point appears next to the secure conference icon when one of the following statuses occurs: • *Empty* - No participant was defined for this conference, or none of the defined participants are connected. • *Single Party* - Only one participant is defined, or only one of the defined participants is connected. • *Not Full* - Not all of the defined participants are connected. • *Faulty Connection* - Participants are connected, but the connection is problematic, and the conference cannot run normally. • *Resource Deficiency* - The resources currently installed in the MCU, such as audio cards, are insufficient for the requested conference. • *Bad Resources* - A fault occurred in one of the cards. Due to the locked nature of conference, no action can be taken to resolve these problems.
	End-of-conference alert for Secure conference	The secure conference is about to end.

Dynamic Highest Common Mechanism (in Video Switching)

In Video Switching conferences, the Highest Common mechanism enables the MCU to select the optimal video parameters for the conference according to the highest video capabilities that are common to all the endpoints participating in the conference. The Highest Common mechanism improves the connectivity between endpoints, eliminates Secondary connections, and facilitates Entry Queue Access and participant's moves during conferences.

The Highest Common mechanism is applied to these video parameters:

- Video Protocol
- Video Format
- Video Frame Rate
- H.263 Annexes - N, F, T and I
- ProMotion

The selected common video is dynamically adjusted with each participant connection to and disconnection from the conference. The Highest Common mechanism is available with both H.320 and H.323 endpoints.

When the conference line rate is lower than 384 Kbps, the system first tries to connect the participants using the H.264 video protocol. Only if the endpoint does not support H.264, the system tries to connect the participants using H.263 or H.261. For example, if all the connected endpoints support the H.263 video protocol, the conference video protocol is set to H.263. When an endpoint connects to the conference using H.261, the conference Video Protocol changes to H.261, and all the endpoints will now connect to the conference using H.261. When this endpoint leaves the conference, the Video Protocol changes back to H.263, followed by the endpoints changing to video protocol H.263. In this example, if the Video protocol was set to H.263, the endpoint connecting using H.261 would have been connected as Secondary (without the video channel) as it could not meet the conference settings.

When monitoring Video Switching conferences, the participant's video parameters can change during the conference, reflecting changes in the conference video settings according to participant connections and disconnections during the conference. Sometimes, lower video quality is viewed during the conference as a result of changes in the video protocol (for example changing from H.263 to H.261) or video resolution (for example, from CIF to QCIF) and other video parameters.

Audio and Visual Indications

While defining the conference parameters, you can enable any of the audio tones (*Entry* tone, *Exit* tone, and *End of Conference Alert* tone) to be heard during an On Going Conference. If *Roll Call* is enabled for the conference, the audio tones are replaced with an appropriate voice message, and visual indications (text and icon) can also be displayed on the participant's endpoint.

The display of visual indications is enabled by setting the appropriate flags in the system.cfg file. For more details about these flags, see the *MGC Administrator's Guide, Chapter 5*.

Table 5-8: Audio and Visual Indications on Participant Endpoints

Event	Audio Indications	Icon Indication	Text Indication

Participant Enters the Conference/ Participant Leaves the Conference	The Entry Tone played is heard by all participants. If *Roll Call* is enabled, the system replaces the Audio tone with the recorded participant's name and a message indication that the participant has joined/left the conference.		Indication format is:
			<Name> Joined/Left (n sites)
			• *<Name>* - (up to 15 characters). The name is displayed:
			  • For defined participants as defined on the MGC Manager or WebCommander.
			  • For defined participants, where no name is defined on the endpoint, then as defined in the MGC Manager and WebCommander.
			  • For undefined participants, the name is displayed as defined in the endpoint.

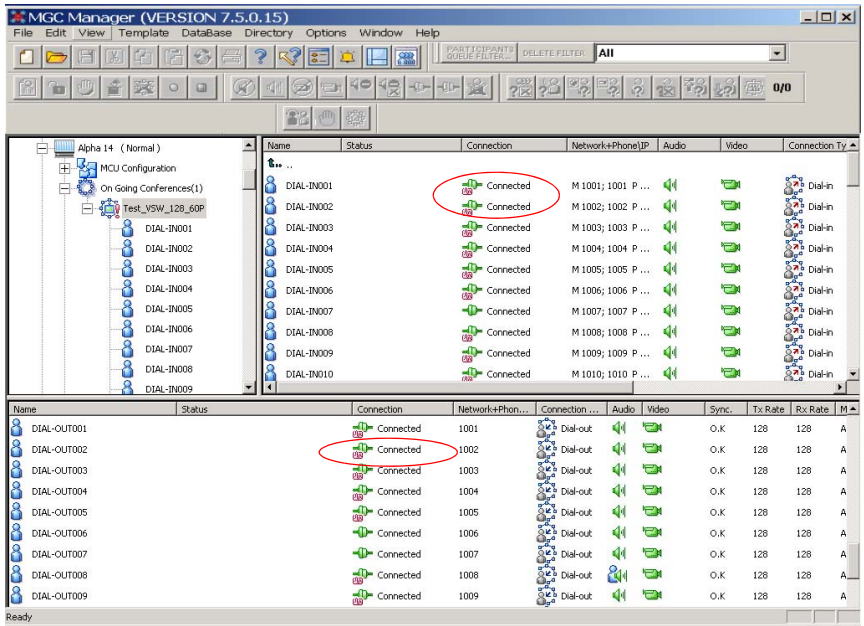
Table 5-8: Audio and Visual Indications on Participant Endpoints

Event	Audio Indications	Icon Indication	Text Indication
Participant Enters the Conference/ Participant Leaves the Conference (cont.)			• If no name is defined, **New Party** will be displayed. • If the participant is *Audio Only*, the name will appear as **Audio Party**. • *Joined/Left* - Describes the *indication* *n* - Total number of sites currently connected to the conference.
End of Conference	The Audio tone is played to all conference participants once, *x* minutes before the end of the conference, where *x* is defined in the *Conference Properties - Settings* dialog box. If *Roll Call* is enabled, the system announces the self-recorded name of the participant connecting to the conference.		The indication "*The Conference is about to end in x minutes"* is displayed, where *x* is defined in the Conference Settings.

Noisy Line Detection and Automatic Muting

During an On Going Conference, you can monitor noisy participant lines by selecting the *Noisy Line* monitor filter. For more details, *see "Monitor Filter" on page 5-25.*

When the Noisy Line monitor filter is enabled, the *Noisy Line* icon is used as an indicator in the *Connection* column, in both the Status and Monitor tables.

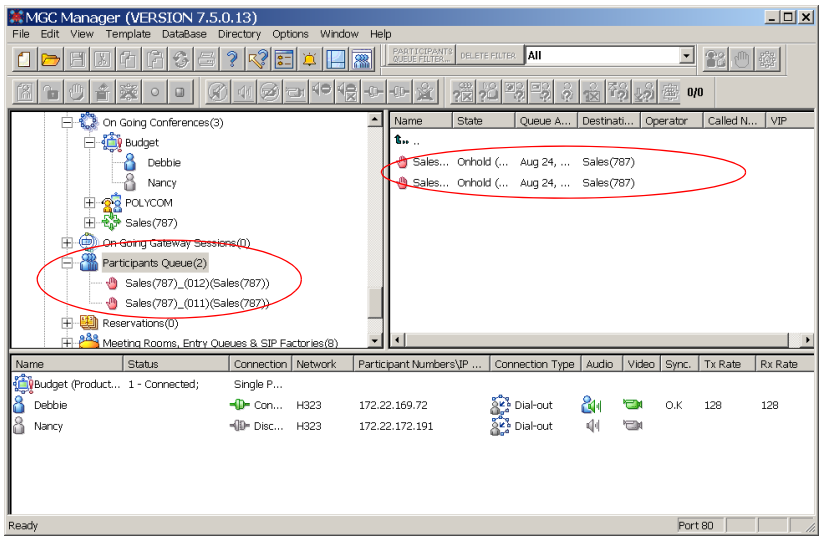


In addition, you can enable the *SilenceIT* option to automatically mute the audio participants who are identified as having a noisy line. SilenceIT uses an algorithm that detects continued background music or other noise that is not in the range of human speech. SilenceIT can be applied to Audio participants in Audio Only and Video conferences. This feature is enabled for conferences with an IVR Service, during the conference setup/reservation stage, using the *Conference Properties - Settings* tab option.

For a detailed description of the SilenceIT feature, see the *MGC Manager User's Guide, Volume II, Chapter 2, "Using SilenceIT"*.

Viewing the Participants Queue

You can view the Participants Queue list in the *Browser* pane, the *Status* pane, or in the *Participants Queue* window.


MGC Manager (VERSION 7.5.0.13)
File Edit View Template DataBase Directory Options Window Help
All
0/0
On Going Conferences(3)
Budget
Debbie
Nancy
POLYCOM
Sales(787)
On Going Gateway Sessions(0)
Participants Queue(2)
Sales(787)_(012)(Sales(787))
Sales(787)_(011)(Sales(787))
Reservations(0)
Meeting Rooms, Entry Queues & SIP Factories(8)
Name State Queue A... Destinati... Operator Called N... VIP
Sales... Onhold (... Aug 24, ... Sales(787)
Sales... Onhold (... Aug 24, ... Sales(787)
Name Status Connection Network Participant Numbers\IP ... Connection Type Audio Video Sync. Tx Rate Rx Rate
Budget (Product... 1 - Connected; Single P...
Debbie Con... H323 172.22.169.72 Dial-out O.K 128 128
Nancy Disc... H323 172.22.172.191 Dial-out
Ready
Port 80

The Participants Queue lists:

- participants whose connection to the conference is managed by an operator (in Attended conferences)
- participants who failed to enter the correct conference Numeric ID or the conference password in the Entry Queue
- participants who have requested operator's assistance during the conference

Participants connecting to the Entry Queue, IVR Queue or Greet and Guide conference (AV Message Service) and participants requiring the operator's attention are listed. In addition, participants in the Greeting, Attended and On Hold stages are also listed in the Participants Queues.

Special management tools are available to speed up and facilitate the operator's work while assisting the participants waiting in the queue.

- An Operator conference must be running in order to monitor the Participants Queue. If no On Going Operator Conference is active, the operator will not be able to attend to the participants waiting in the queue.
- Only the participants in an IVR-enabled conference, in which the *Enable Operators Assistance* option is activated for the IVR Service, can request help during the conference.
- Only the participants in an Entry Queue or IVR-enabled conference that is set for the Attended mode (*On-hold for Operator Assistance*, selected in the IVR Service Properties *Welcome Message* tab), are automatically moved to the Participants Queue when connecting to the conference.

To display the participants waiting in the Participants Queue:

1. Connect to the MCU and expand its options tree.
2. Expand the *Participants Queue* icon to list the participants in the *Browser* pane or click the **Participants Queue** icon to display the list in the *Status* pane.

   Alternatively, click the **Participants Queue** button in the main toolbar to display the participants waiting in the queue in a separate window.

   For the detailed description of the Participants Queue tools and management, see *"Listing Participants in the Participants Queue Window" on page 8-34*.

Viewing Site Names in Video

During Continuous Presence video conferences, you can view the endpoint site names in the endpoint's video layout windows. Both H.320 and H.323 endpoints can display up to 33 characters of the site's name, depending on the window's layout (size).

Figure 5-1 shows an example site name display in the Polycom ViaVideo endpoint window.

Figure 5-1: Site Name Display in ViaVideo

The system can only display the site names that have been defined in the endpoints. Endpoint site names are displayed when the appropriate flags have been enabled in the "system.cfg" file.

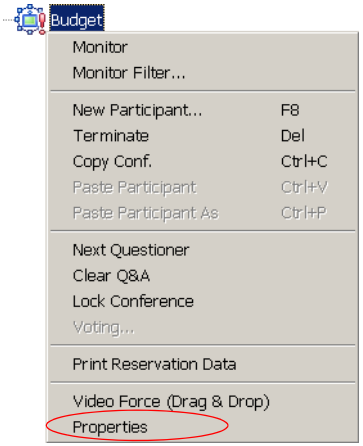
- The endpoint site names cannot be modified from the MGC Manager or the Click&View applications.
- With H.320 participants, the *Chair Control* parameter must be set to **Auto**.
- Display of participant names is not available in conferences using QCIF video format.
- H.320 participant names in VSW conferences can be displayed by setting the FECC/CHAIR flag in the System.cfg to **NO**. For more details, see *MGC Administrator's Guide, Chapter 5, "Edit "system.cfg".*

Conference Level Monitoring

In addition to the general conference information that appears in the *Status* and the *Monitor* tables, you can view the details of the conference current status and setup parameters, using the *Conference Properties* dialog boxes. While checking the properties, you can also edit several parameters.

To view parameters of an On Going Conference:

1. In the *Status* pane, *Browser* pane or *Monitor* pane, right-click the icon of the conference to monitor, and then click **Properties.**

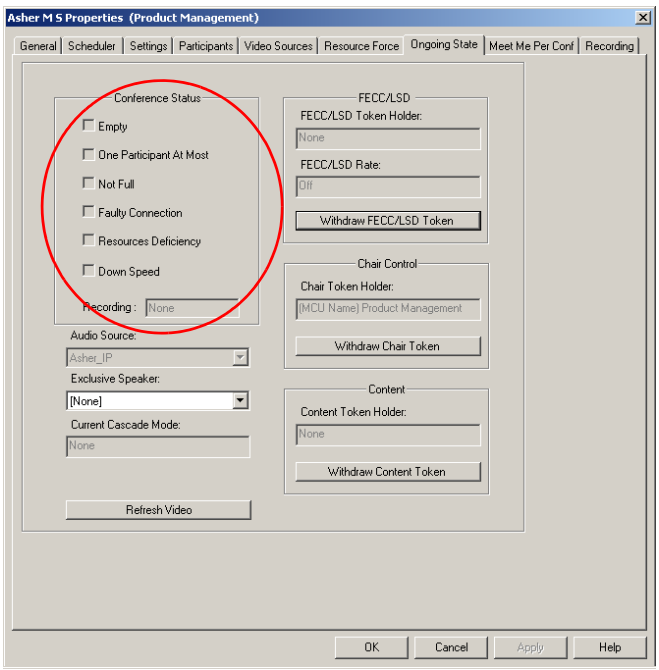


   The *Conference Properties* dialog box opens.
   New tabs, *Ongoing State* and *Scheduler*, appear in the *Properties* dialog box.

   For a detailed description of conference definition modifications that can be performed during a conference, *see Chapter 6, "Operations Performed During On Going Conferences"*.

2. Click the **Ongoing State** tab to view the current conference status.

The *Conference Properties - Ongoing State* dialog box opens.



The following conference parameters are displayed:

Table 5-9: On Going Conference Properties - On Going State

Field/Option	Description
Conference Status	Displays the possible faulty statuses of a conference. A problem that occurred during conference, for example a *Resource Deficiency*, is indicated by a checked check box. These statuses are also listed in the *Connection* column in the *Monitor* or the *Status* pane. For a detailed description of conference statuses, see Table 5-2, “On Going Conference - Monitor Pane Columns,” on page 5-10.
Recording	Displays the name of the participant (port) that was defined as the recording port for the conference. The *Recording Port* is used for connection to an external recording device.

Table 5-9: On Going Conference Properties - On Going State (Continued)

Field/Option	Description
Audio Source	Displays the name of the current conference speaker.
Exclusive Speaker	Displays the name of the Exclusive Speaker designated for the conference, for example in Lecture mode. You can select another speaker from the list during the conference.
Current Cascade Mode	If the Cascading option is enabled for the conference, displays the name of the Master conference. For a description of the cascading mode, see the *MGC Manager User's Guide Volume II, Chapter 5.*
FECC/LSD Token Holder	If the FECC/LSD option was enabled for a video conference, displays the name of the participant who is the current holder of the FECC/LSD token and can control the far-end camera. For more details on this option, see "Far End Camera Control (FECC) and Low Speed Data (LSD)" in the *MGC Manager User's Guide, Volume II, Chapter 1.*
FECC/LSD Rate	If the FECC/LSD option was enabled for a video conference, and the LSD channel rate was defined, displays the line rate used to transfer the FECC commands. For more details on this option, see "Far End Camera Control (FECC) and Low Speed Data (LSD)" in the *MGC Manager User's Guide, Volume II, Chapter 1.*
Withdraw FECC/ LSD Token	Click this button to withdraw the *FECC/LSD Token* from the current participant. For more details on this option, see "Far End Camera Control (FECC) and Low Speed Data (LSD)" in the *MGC Manager User's Guide, Volume II, Chapter 1.*
Chair Control - Chair Token Holder	Displays the name of the participant holding the chair token. For more details, see the "H.243 Chair Control" in the *MGC Manager User's Guide, Volume II, Chapter 5.*
Withdraw Chair Token	Click this button to withdraw the chair token from the current holder and return it to the MCU for assignment to other endpoints.

Table 5-9: On Going Conference Properties - On Going State (Continued)

Field/Option	Description
Content Token Holder	If the conference was defined as a video session with Dual Stream H.239/*People+Content* or *People and ContentV0*, displays the name of the endpoint that is currently broadcasting the content. For more details, see the *MGC Manager User's Guide Volume II, Chapter 1.*
Withdraw Content Token	Click this button to withdraw the Content token from the current holder and to return it to the MCU for assignment to other endpoints.
Refresh Video	Click this button to refresh the video image.

Participant Level Monitoring

Participants can join conferences in one of the following three ways:

- Via an Entry Queue
- Directly to an IVR-enabled conference
- As a pre-defined dial-in or dial-out participant

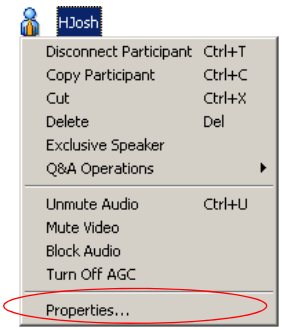
The connection process can be monitored by the operator. When joining via an Entry Queue or directly to a conference, the connection process can be attended or unattended. The attended process is described in Chapter 8, "Entry Queues, Operator Conferences, and Attended Conferencing. In unattended conferencing the operator is involved only if there are problems that require attention.

Displaying Participant Properties

In addition to the information that is listed in the *Status* and the *Monitor* panes, you can view detailed information regarding the status and properties of each listed participant, using the *Participant Properties* dialog boxes. This information is especially useful when a problem occurs during the connection of the participant to the conference.

To display the participant's properties:

- In the *Status* pane, *Browser* pane or *Monitor* pane, click the *Participant* icon.
  Alternatively, right-click the icon of the participant to monitor, and then click **Properties**.



The *Participant Properties* dialog box opens.

Monitoring ISDN/ATM/MPI/T1-CAS Participants

Using the *Participant Properties* dialog box, you can verify the properties of an ISDN participant. The *Identification*, *Advanced*, *Connection Info1*, *Connection Info2*, *Resource Details*, *Disconnection Cause*, *H221* (or another used protocol) and *Video Sources* tabs contain information that is relevant to the participant status only while the conference is running and is used to monitor the participant's status when connection problems occur.

For a detailed description of the participant properties that are set up in the *Identification* and *Advanced* tabs, see *Chapter 4, "ISDN/ATM/MPI/T1-CAS Participant Definition" on page 4-90*.

To view and modify the participant's properties during a conference:

1. In the *Participant Properties* dialog box, click the **Identification** tab.

   Information is displayed in the *Participant Properties - Identification* dialog box. You can view the name and the dial-in numbers that were used by the participant to connect to the Entry Queue/Conference.

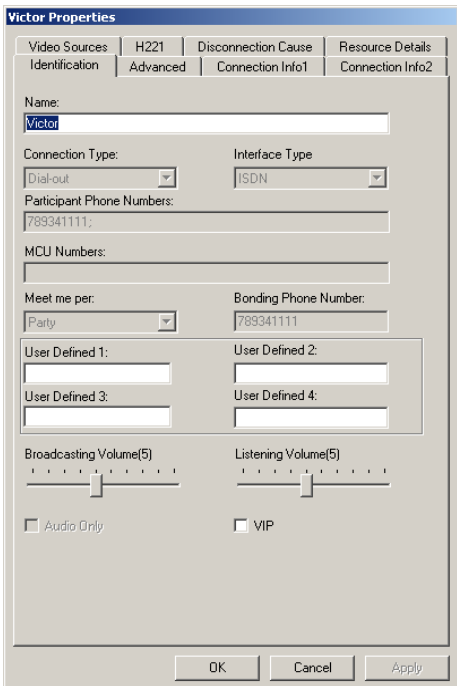


Table 5-10 describes the user defined *Identification* properties that you can modify during an On Going Conference. Other parameters are described in *Chapter 4, "Defining On Going Conferences.*

Table 5-10: ISDN Participant Properties - Identification

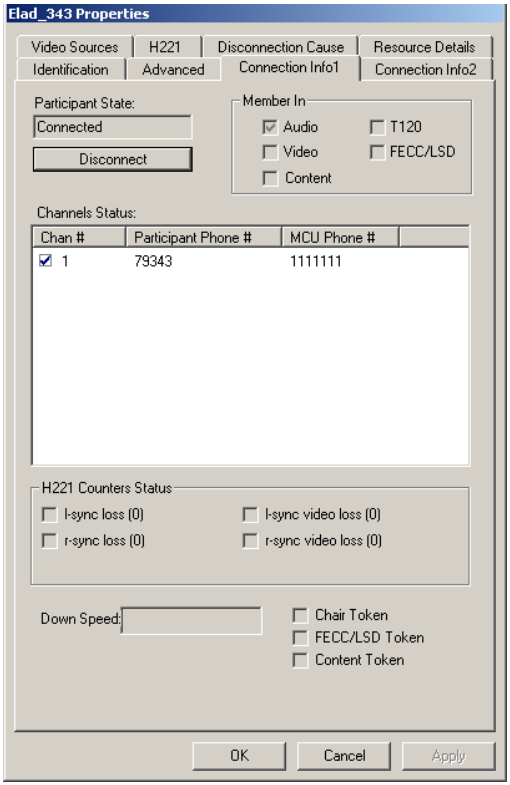
Field/Parameter	Description
Name	Indicates the participant's name.
User Defined 1-4	These 4 fields enable you to enter additional information for the participant, for example the E-mail address or the telephone number, or any other required information.
Broadcasting Volume	Indicates the volume at which the participant is heard by other participants. If not modified, the volume stays at the default level 5.
Listening Volume	Indicates the volume at which the participant hears other participants. If not modified, the volume stays at the default level 5.
VIP	While the participant is connected, indicates whether the participant status is defined as VIP.

2. If required:
   - — change the participants name by entering a new name in the *Name* field.
   - — enter information in any of the user defined fields
   - — adjust the broadcasting / listening volume using the slider
   - — change the VIP status by selecting or clearing the VIP check box

The participant's Identification and Advanced parameters can be modified during an On Going Conference only if the participant is disconnected from the conference.

3. Click the **Connection Info1** tab.

The *Participant Properties - Connection Info1* dialog box opens.



The following information is displayed in *Connection Info1*:

Table 5-11: ISDN Participant Properties - Connection Info1

Field/Parameter	Description
Participant State	Indicates the connection status of the participant as it appears in the *Monitor* and *Status* panes. If there is a problem, the appropriate status appears. For example, *Disconnected* indicates that the participant was disconnected from the conference.
Disconnect/ Reconnect	Click this button to disconnect the participant from the conference. The button changes to *Reconnect*. Click **Reconnect** to connect a disconnected participant to the conference.

Table 5-11: ISDN Participant Properties - Connection Info1 (Continued)

Field/Parameter	Description
Member in	Checked boxes indicate which multimedia channels (Audio, Video and Data - T.120) are connected. Sometimes, if the participant is partially connected, only the audio channel is connected. The LSD check box indicates that the LSD channel is open. For more details, see the *MGC Manager User's Guide Volume II, Chapter 1.* **Note:** For Audio Only participants, only the **Audio** check box is checked.
Channels Status	Displays the status of each of the participant's channels in a table. You can use the cursor to change the width of the columns or use the scroll bars to browse. The status table columns are: • ***Channel #*** - Indicates the number of channels used by the participant and whether the channel is connected (which is indicated by a check mark) or disconnected. • ***Participant Phone #*** - In a *dial-in* connection, indicates the participant's CLI (Calling Line Identification) as identified by the MCU. In a dial-out connection, indicates the participant's phone number dialed by the MCU for each channel. • ***MCU Phone #*** - In a *dial-in* connection, indicates the MCU number dialed by the participant. In a *dial-out* connection, indicates the MCU (CLI) number as seen by the participant. This is the number entered in the *MCU Number* field in the *Network Service.* **Note:** For Audio Only participants, only one channel is displayed.

Table 5-11: ISDN Participant Properties - Connection Info1 (Continued)

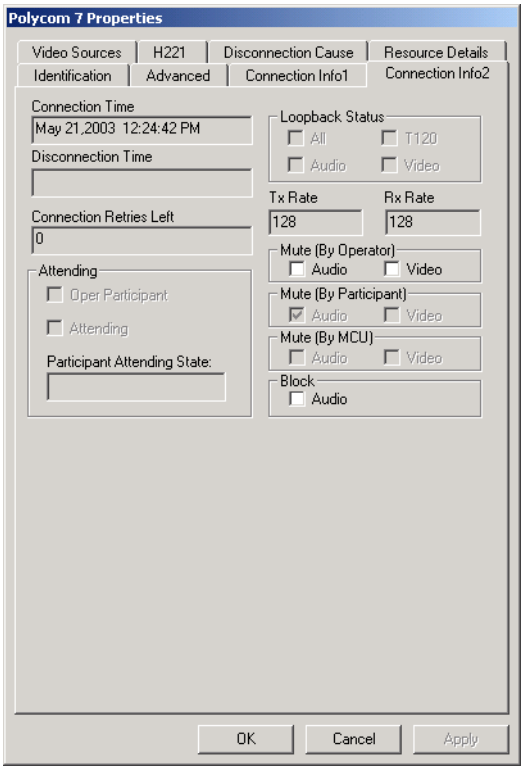
Field/Parameter	Description
H221 Counters Status	Indicates the synchronization status. • ***l-sync loss ()*** - Checked when there is a general synchronization problem with the MCU. • ***r-sync loss ()*** - Checked when there is a general synchronization problem with the participant site. • ***l-video sync loss ()*** - Checked when there is a video synchronization problem in the MCU. • ***r-video sync loss ()*** - Checked when there is a video synchronization problem in the participant's endpoint. The counter indicates the number of times the system tried to synchronize. When the synchronization is lost, an exclamation point (!) appears on the *Conference* icon and the *Participant* icon.
Down Speed	Downspeeding occurs during call setup and is an automatic process performed by the MCU. During call setup, Downspeeding allows Bonded calls to connect with missing or unsynchronized channels by excluding these channels from the call setup process. This results in a lower line rate for the connection. However if the channels are restored the original line speed is restored. Downspeeding is supported in Continuous Presence and Transcoding video sessions only. The Downspeed process is enabled and disabled in the "system.cfg" file. When *Down Speed* is activated, three types of messages can be displayed: • ***Downspeeding*** - Downspeed is in progress. • ***Downspeeded*** - The process is completed. • ***Empty*** - The process is inactive.
Chair Token	When checked, indicates that the participant is holding the Chair Token.
FECC/LSD Token	When checked, indicates that the participant is holding the Data Token.

Table 5-11: ISDN Participant Properties - Connection Info1 (Continued)

Field/Parameter	Description
Content Token	When checked, indicates that the participant is holding the Content Token.

When the connection process is completed successfully, the transmission rate and the aggregation method used by the endpoint are displayed in the *Monitor* and *Status* panes.

4. To view general information regarding the participant connection and to (optionally) mute or unmute the participant's audio or video channels, click the **Connection Info2** tab.
The *Participant Properties - Connection Info2* dialog box opens.



The following information is displayed in *Connection Info2*:

Table 5-12: ISDN Participant Properties - Connection Info2

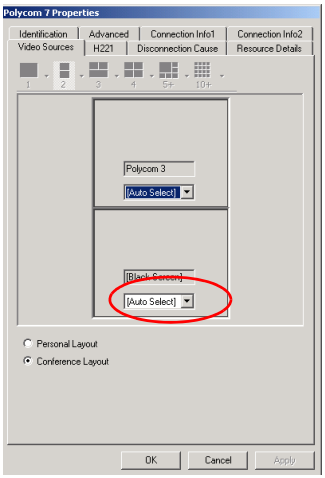
Field/Parameter	Description
Connection Time	The date and time the participant connected to the conference. **Note:** The time format is derived from the operating system time format.
Disconnection Time	The date and time the participant was disconnected from the conference.
Loopback Status	For future version.
Connection Retries Left	Indicates the number of retries left for the system to connect the participant to the conference.
Tx Rate	The line rate at which data sent *from the MCU* is received by the endpoint.
Rx Rate	The line rate at which data sent *from the endpoint* is received by the MCU.
Mute (By Operator)	When checked by the operator, mutes the participant's audio or video transmission to the conference **Note:** The *Video Mute* option may be disabled in the system.cfg and will not be applied, even if checked here.
Mute (By Participant)	When checked, indicates that the participant has muted the audio and/or video transmissions from the endpoint to the conference.
Mute (By MCU)	If checked, indicates that the audio and/or video transmissions from the endpoint have been muted by the MCU (as in the Exclusive Speaker mode or in a Lecture Show).
Block	When checked, the audio transmission from the conference to the participant's endpoint is blocked, but the participant will still be heard by other participants.

Table 5-12: ISDN Participant Properties - Connection Info2 (Continued)

Field/Parameter	Description
Attending	Displays the participant or operator status in an Attended conference (IVR-enabled or Greet and Guide). • ***Oper Participant*** - This option is checked when viewing the operator parameters. • ***Attending*** - This option is checked when the participant is in an Attended state.
Participant Attending State	Displays the status of the Attended participant: • ***Attended*** - The participant is being assisted by the operator (in an Operator conference) • ***On Hold*** - The participant was placed on hold and hears background music. In video conferences, the participant also views the Welcome slide. For more details on Attended conferences, see the *MGC Manager User's Guide Volume II, Chapter 4*.

5. If the participant is in a Continuous Presence conference, click the **Video Sources** tab to check the video layout selected for the participant, or to select another video layout.

   The *Participant Properties - Video Sources* dialog box opens.



This dialog box displays the participant's video layout and video forcing settings (the participants that are forced to each of the layout windows).

The following information is displayed:

Table 5-13: ISDN Participant Properties - Video Sources

Field/Parameter	Description
Layout view	Displays the current video layout the participant is viewing. Each participant window includes: • *Name box* - indicating the name of the participant shown in the window. • *Drop-down list* - names of the other conference participants who can be selected to be "forced" into the video layout window.
Layout options	A selected option button indicates which video layout is currently used by the participant. • ***Personal Layout*** - the layout selected for this participant (disabled for conferences running on a Standard video card). • ***Conference Layout*** - the layout selected for the conference.

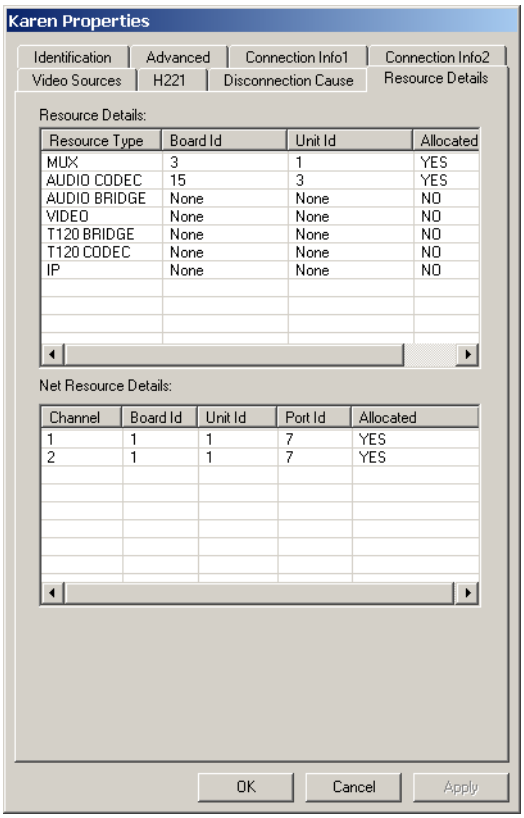
In a Continuous Presence conference running on a Video+ card, this dialog box indicates whether the participant is viewing the video layout of the conference or their personal video layout. If required, you can:

— select the video layout viewing mode (Conference or Personal Layout)

— if in the Personal Layout mode, select the video layout for this participant (video force)

When running a conference on a Standard video card, only the Conference Layout can be viewed by the participants.

6. To view the MCU resources used to handle the participant in the conference, click the **Resource Details** tab.
The *Participant Properties - Resource Details* dialog box opens.



This dialog box lists the resources that may be used to handle the participant's call. The following information is displayed:

Table 5-14: ISDN Participant Properties - Resource Details

Pane/Table	Column/ Parameter	Option/Description
Resource Details	Displays information about the MCU cards which handle the participant connection.	

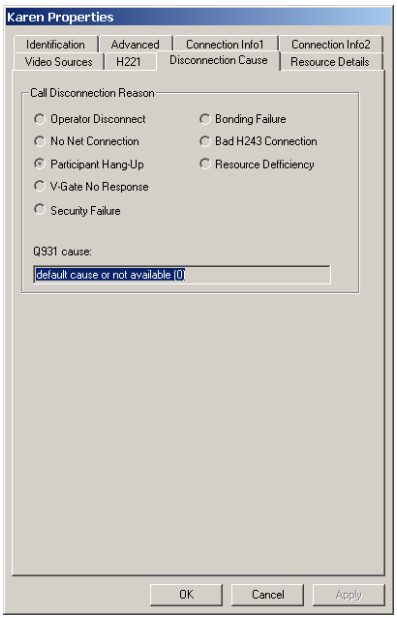
Table 5-14: ISDN Participant Properties - Resource Details (Continued)

Pane/Table	Column/ Parameter	Option/Description
Resource Details (cont.)	*Resource Type*	Displays the type of MCU cards used to run the conference. The following types are listed: • ***MUX*** - the Video/MUX card used to handle H.320 video calls. • ***Audio Codec*** - The port that performs the audio encoding and decoding. • ***Audio Bridge*** - The audio bridge that mixes the audio signal received from various ports. • ***Video*** - The unit on the video card that manages the video signal received from one endpoint. • ***T.120 Bridge*** - The resource on the data card that manages the data conference. • ***T.120 Codec*** comprises the T.123 protocol - The resource that transfers the data from the endpoint to the MCS in a T.120 conference. • ***IP*** - A network interface module that handles IP participants.
	Board ID	Identifies the MCU slot in which the card that handles the participant, is installed.
	Unit ID	Identifies the unit on the card that handles the participant.
	Allocated	Indicates whether the MCU resources listed in the *Resource Type* column are used to run the conference or not. **Note:** The video card is used only in Continuous Presence conferences.
Net Resource Details	Displays information about the network interface module that handles the monitored participant.	

Table 5-14: ISDN Participant Properties - Resource Details (Continued)

Pane/Table	Column/ Parameter	Option/Description
Net Resource Details (cont.)	*Channel*	The number of the participant's channel.
	Board ID	The slot number in which the Network card used to handle the participant, is installed.
	Unit ID	The span that handles the participant in the conference.
	Port ID	The port number on the Network card that was allocated to the participant.
	Allocated	Indicates whether the Network card installed in the MCU is used to run the conference or not.

7. If the participant did not connect to the conference, click the **Disconnection Cause** tab to display the cause.
The *Participant Properties - Disconnection Cause* dialog box opens.



This dialog box lists the categories and parameters which indicate the cause of participant's disconnection from the conference. The information is displayed according to the protocol/standard defined for the participant, and the parameters vary accordingly. For example, different parameters play a role in the disconnection of ISDN or IP participants.

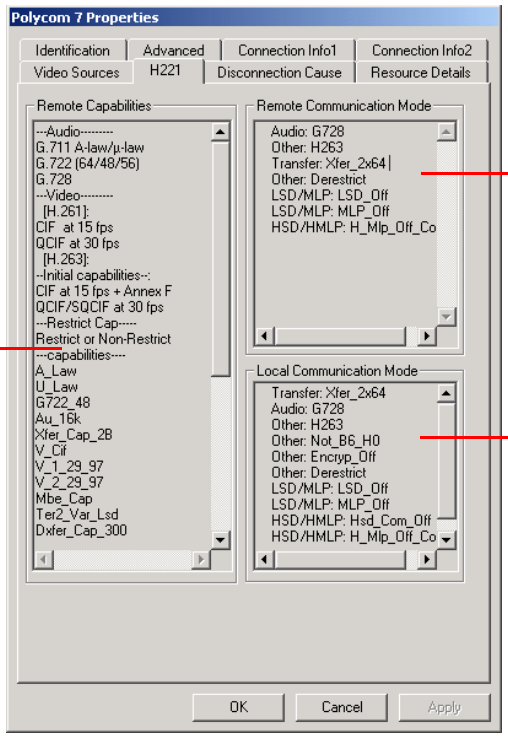
The following information is displayed:

Table 5-15: Disconnection Cause Parameters

Cause	Description
Call Disconnection Reason	***Operator Disconnect*** - The operator disconnected the participant from the conference. The *Cause* field displays the name of the operator who disconnected the participant. ***No Net Connection*** - The network channels could not be connected. This may also be caused when the communication lines are unavailable or busy. ***Participant hang up*** - The participant disconnected from the conference. ***V-Gate No Response*** - Applicable in an ATM connection, when the V-Gate is unable to negotiate a connection with the endpoint. ***Security Failure*** - An encryption failure occurred. ***Bonding Failure*** - The connection could not be established between the participant and the MCU when Bonding is used. ***Bad H243 Connection*** - Problems with the connection protocol. ***Resource Deficiency*** - Not enough hardware resources (MUX, video, audio, data or network cards) to handle the participant call.
Cause	If there is a problem in the connection, which is indicated by one of the call disconnection reasons, the system displays an explanation for this problem. For example, if *No Net Connection* disconnection reason is selected, the explanation *called party line is busy* appears in the *Cause* field. For a detailed description of disconnection causes and parameters, see Appendix A.

8. If problems are indicated during the participant connection to the conference and you want to further investigate the reasons, click the **H221** tab.

   The *Participant Properties - H221* dialog box opens.



Displays the endpoint's actions when establishing connection with the MCU

Lists the endpoint's audio, video, and line capabilities as sent from the remote site

Displays the MCU's actions when establishing connection with the participant's endpoint

The *H221* dialog box displays real-time information about the capabilities that are being exchanged between the MCU and the endpoint during the connection process. When the connection process is aborted, you can use this information to identify the cause of the connection problem and the stage at which the connection process stopped.

Connection problems are caused by discrepancies between the participant's capabilities as received from the participant's endpoint, the capabilities as defined in the *Participant's Properties* dialog box, and the capabilities as defined in the *Conference Properties* dialog box. For example, the *Remote Capabilities* list may indicate that the participant is using a restricted line (56 Kbps per channel instead of 64 Kbps). However, this *Restricted* option was not selected in the

participant's properties dialog box nor was it set for the conference (if the conference is *Restricted*, a special indication appears in the *Local Communication Mode* list). In such a case, you may need to change the participant and conference definition to *Restricted* or change the conference video session to *Transcoding.*

Connecting Auto-Detect Pre-defined Participants

When a participant defined as *Auto Detect* dials into the MCU, each channel is detected by the MCU and the system tries to connect the participant using the Bonding protocol. If the connection using Bonding is successful, the negotiation with the endpoint communicates the number of additional channels to be connected. The connection of the participant proceeds using the same procedure for Bonding connection. If the connection using Bonding (aggregation) fails, the MCU tries to connect the endpoint using the H221 standard. If this fails, the connection with the endpoint is terminated. If the capabilities exchange is successful, the endpoint is connected according to the line rate communicated by the endpoint during the capabilities exchange, and using the standard H.221 aggregation procedure. These negotiations and the final transmission rate are indicated in the *Participant Properties - H221* dialog box.

When a dial-out participant connects to the conference, the system exchanges capabilities with the endpoint and attempts to connect the participant using Bonding. If Bonding is unavailable, the participant is connected in H.221 mode. Once the aggregation method is determined, the MCU attempts to connect the participant in the line rate defined for the conference. If it fails, the MCU will connect the participant using a lower line rate.

The Bonding option is enabled for the MCU in the “system.cfg” file. The Default setting is BONDING = YES

- The Bonding Yes/ No flag (in “system.cfg”) enables the system administrator to disable the “Bonding” option when this feature is not required by the system. If BONDING=NO, the system rejects all ISDN participants (except participant using leased lines) whose aggregation mode is set to “Bonding,” “Auto” or “Auto Detect” at the reservation stage. In such a case, an appropriate error message is displayed: ”BONDING_NOT_SUPPORTED”.
- When the Bonding fails and the H.221 is selected, there may be problems connecting the participant if the operator entered only one dial number and the participant’s line rate is higher than 2B (128 Kbps).

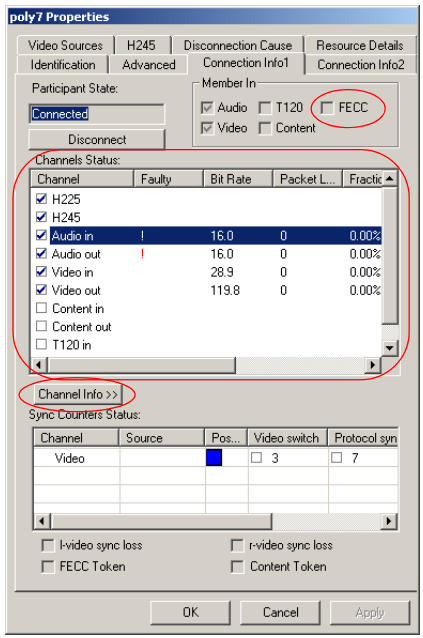
Monitoring IP (H.323 and SIP) Participants

Using the *Participant Properties* dialog box, you can monitor the properties of IP participants. For a detailed description of the participant properties that are set up in the *Identification* and *Advanced* tabs, see *Chapter 4, "IP (H.323 and SIP) Participant Definition" on page 4-101*.

The participant's Identification and Advanced parameters can be modified during an On Going Conference only if the participant is disconnected.

To view and modify the participant's properties during a conference:

1. In the *Participant Properties* dialog box, click the **Connection Info1** tab. The *Participant Properties - Connection Info1* dialog box opens.



The *Connection Info1* window displays the information sent from the IP card to the MCU control unit. This information is refreshed every two seconds. The information is derived from:

— RTP

— RTCP reports

— Media channels

The RTP information that is created by the RTP processor of the IP card, includes packet loss, overflow, packet fragmentation, jitter buffer parameters, and delays.

The RTP statistics are displayed in two views, *Accumulated* and *Interval*:

— In the *Accumulated* view, the system displays statistics that it gathered since the session start (since the participant connected to the conference).

— In the *Interval* view, the system displays the statistics for the last five minutes, and it is updated continuously.

The RTCP information is taken from the RTCP reports sent and received by the MCU (IP card) to/from the endpoints. This information is refreshed every 5 seconds.

An exclamation point appears in the *Faulty* column in the *Channel Status* box when a faulty condition is detected for a channel, for example, the packet loss has exceeded a threshold defined in the system. The parameters thresholds are defined in the system.cfg file and are based on standard network behavior. An exclamation point indicates that further investigation may be required, using the additional parameters in the Advanced pane. This is a real-time indication; when the faulty condition is resolved the exclamation point disappears.

The following information is displayed in the *Connection 1* dialog box:

Table 5-16: IP Participant Properties Connection Info1 Parameters

Field/Option	Description
Participant State	The connection status of the participant as it appears in the *Monitor* and *Status* panes. If there is a problem with participant's connection, the appropriate status indication appears, for example, *Disconnected*.
Disconnect/ Reconnect	Depending on the current participant status in the On Going Conference, this button allows you to disconnect or reconnect the participant.

Table 5-16: IP Participant Properties Connection Info1 Parameters

Field/Option	Description
Member In	Channels: Audio, Video, T.120, Content and FECC The checked boxes indicate which multimedia channels (audio, video, FECC, Content and data) are connected. For example, if the participant is partially connected, only the audio channel is connected.
Channels Status	Indicates the channel types used by the participant and whether the channel is connected (which is indicated by a check mark) or not. Incoming channels are the endpoint's capabilities as established in the signaling negotiations. Outgoing channels are the MCU's capabilities as established in the signaling negotiations. The following channels are listed: *H.225* - The call-signaling channel. *H.245* - The Control channel over which the MCU and the endpoint capabilities are exchanged. *Audio in* - Incoming Audio channel for the media stream. *Audio out* - Outgoing Audio channel for the media stream. *Video in* - Incoming Video channel with a QCIF media stream with a fixed bitrate for all endpoints. *Video out* - Outgoing dynamic video channel with a CIF media stream and higher (4CIF) bitrate for each participant. *Content in* - Indicates whether the incoming Content channel (in H.239 People+Content conferences) is open. *Content out* - Outgoing data media channel (in H.239 and People+Content conferences). *FECC in* - Indicates whether the incoming FECC channel is open. *FECC out* - Indicates whether the outgoing FECC channel is open. No other information is relevant for this channel. *T120 in* - Indicates whether the incoming T.120 channel is open. *T120 out* - Indicates whether the outgoing T.120 channel is open.

Table 5-16: IP Participant Properties Connection Info1 Parameters

Field/Option	Description
Channels Status (cont.)	**Notes:** • The FECC channels appear in the Channel list only when FECC is enabled for the conference. • When FECC is enabled, T.120 channels are disabled and vice versa.
Faulty	A red exclamation point indicates a faulty channel condition enabling further investigation if required. This is a real-time indication: when resolved, the exclamation point disappears.
Bit Rate	The actual transfer rate for the channel. If FECC is enabled for the conference, this column indicates the FECC channel transfer rate: 6.4 or 4.8 (if encryption is enabled for the participant).
Packet Loss	Indicates the accumulated count of all packets that are missing since the channel opened. This field is for information only and does not cause the display of the exclamation point as it may indicate a problem at the connection stage and not a current event. It can indicate problems with the network, which may affect the audio and video quality.
Fraction Loss (Peak)	The ratio between the number of lost packets and the number of transmitted packets since the last RTCP report. *Peak* (in parentheses) indicates the highest ratio recorded since the channel opened.
Number of Packets	The number of received or transmitted packets (according to the channel type) since the channel has opened. This field is for information only and does not cause the display of the exclamation point.
Jitter (Peak)	Displays the network jitter (the deviation in time between the arriving packets) as reported in the last RTCP report. This is usually caused by network congestion or route changes. *Peak* (in parentheses) reflects the maximum network jitter since the channel opened.
Latency	Indicates the time it takes a packet to travel from one end to another in milliseconds. The listed value is derived from the RTCP report.

Table 5-16: IP Participant Properties Connection Info1 Parameters

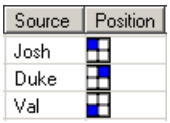
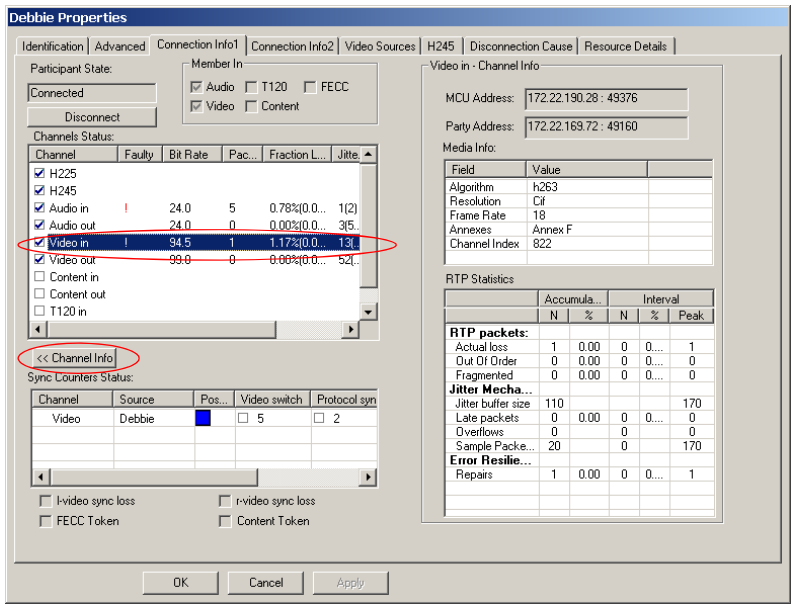
Field/Option	Description
Sync Counters Status	***Channel*** - The channel type. ***Source*** - The name of the participant currently viewed by this participant. In a Software Continuous Presence conference, the *Source* displays the names of the participants currently viewed in the Video Layout window. ***Position*** - The video layout position indicates the place of each participant as they appear on-screen during an On Going Software Continuous Presence conference. For example: In the 2 x 2 Video Layout window, participant Josh, is indicated by a small blue box in the top left corner of the image.  In all other conferences the *Position* indicator is a blue square, and the participant's position is not indicated. The position each participant occupies can be defined in the *Conference Properties - Video Sources* window. If no video forcing is applied (*Auto Select)*, the system assigns participants to the video windows randomly. There are three stages in the synchronization that occur during the connection between the endpoint and the MCU: Video Switch, Protocol and Video Intra. These synchronization aspects indicate whether the video information has been correctly transmitted and received between the endpoint the MCU. The system indicates if there was any problem in any of the synchronization stages between the endpoint and the MCU. Check marks in any of the check boxes indicate that the system failed to synchronize, and the cause of the failure. ***Video Switch*** - Video Switch is a certain pattern (sequence) of bits in the video information. The identification of this pattern is used for the first stage in the synchronization process. Once the synchronization is established, the system moves to the next stage in the synchronization process. This option is checked when there is a problem in the first stage of the synchronization. The counter indicates the number of times the system tried to synchronize.

Table 5-16: IP Participant Properties Connection Info1 Parameters

Field/Option	Description
Sync Counters Status (cont.)	***Protocol Sync Loss*** - Indicates whether the system was able to synchronize the bits order according to the selected video protocol (H.261 or H.263). This option is checked when there is a problem in the second stage of the synchronization. The counter indicates the number of times the system tried to synchronize. ***Video Intra Sync*** - Intra is a special video frame that is used for synchronization. Indicates whether the synchronization on a video H.261 or H.263 Intra frame was successful. ***Video Resolution*** - The video resolution of the participant.
I-sync video loss (0)	When checked, indicates that there is a video synchronization problem in the participant's endpoint. The counter indicates the number of times the MCU had to re-synchronize. **Note:** This parameter is only relevant in *Continuous Presence* conferences.
r-sync video loss (0)	When checked, indicates that there is a video synchronization problem in the MCU. The counter indicates the number of times the endpoint had to re-synchronize. **Note:** This parameter is only relevant in *Continuous Presence* conferences.
FECC Token	When checked, indicates that the participant is holding the Data Token.
Content Token	When checked, indicates that the participant is holding the Content Token.

If the *Faulty* indicator (exclamation point) appears next to a channel and you want to investigate the source of the problem, you can display additional information for that channel.

2. In the *Channel Status* table, click the Channel to investigate, and then click the **Channel Info** button.
   The *Channel Info* area opens.



The *Channel Info* pane displays additional parameters relating to the transmission of packets and their processing by the MCU, for the selected channel. The information is specific to the type of channel you select in the Channels Status channels list, for example, *Video In* or *Video Out*, *Audio In* or *Audio Out*, etc.

You can resize the column width or use the scroll bars to browse.

The following detailed information is displayed in the Channel Info pane:

Table 5-17: IP Participant Properties - Video In Channel Info

Field/Option	Description
MCU Address	The IP address of the H.323 card installed in the MCU to which the participant is connected and the UDP port number allocated to the participant incoming media stream on the MCU side.
Party Address	The IP address of the participant and the port number allocated to the media stream on the participant side.
Media Info	This table provides field/value information about currently used video properties and settings.
Algorithm	Indicates the audio or video algorithm and protocol.
Frame per packet (audio only)	The number of audio frames per packet that are transferred between the MCU and the endpoint. If the actual Frame per Packets are higher than Frame per Packets declared during the capabilities exchange, a Faulty flag is displayed.
Resolution (video only)	Indicates the video resolution in use. If the actual resolution is higher than resolution declared in the capabilities exchange, the Faulty flag is displayed. For example, if the declared resolution is CIF and the actual resolution is 4CIF, the Faulty flag is displayed.
Frame Rate (video only)	The number of video frames per second that are transferred between the MCU and the endpoint.
Annexes (video only)	Indicates the H.263 annexes in use at the time of the last RTCP report. If the actual annexes used are other than the declared annexes in the capabilities exchange, the Faulty flag is displayed.
Channel Index	For Polycom Internal use only.
RTP Statistics - RTP Packets	This information may indicate problems with the network which can affect the audio and video quality.
Actual loss	The number of missing packets counted by the IP card as reported in the last RTP Statistics report. If a packet that was considered lost arrives later, it is deducted from the packet loss count. Packet loss is displayed

Table 5-17: IP Participant Properties - Video In Channel Info (Continued)

Field/Option	Description
Actual loss (cont.)	with the following details: • ***Accumulated N*** - number of lost packets accumulated since the channel opened. • ***Accumulated %*** - percentage of lost packets out of the total number of packets transmitted since the channel opened. • ***Interval N*** - number of packets lost in the last RTP report interval (default interval is 5 minutes). • ***Interval %*** - percentage of lost packets out of the total number of packets transmitted in the last RTP report interval (default interval is 5 minutes). • ***Peak*** - the highest number of lost packets in a report interval from the beginning of the channel's life span.
Out of Order	The number of packets arriving out of order. The following details are displayed: • ***Accumulated N*** - total number of packets that arrived out of order since the channel opened. • ***Accumulated %*** - percentage of packets that arrived out of order out of the total number of packets transmitted since the channel opened. • ***Interval N*** - number of packets that arrived out of order in the last RTP report interval (default interval is 5 minutes). • ***Interval %*** - percentage of packets that arrived out of order out of the total number of packets transmitted in the last RTP report interval (default interval is 5 minutes). • ***Peak*** - the highest number of packets that arrived out of order in a report interval from the beginning of the channel's life span.

Table 5-17: IP Participant Properties - Video In Channel Info (Continued)

Field/Option	Description
Fragmented	Indicates the number of packets that arrived to the IP card fragmented (i.e., a single packet broken by the network into multiple packets). This value can indicate the delay and reordering of fragmented packets that require additional processing, but is not considered a fault. The Fragmented information is displayed with the following details: • ***Accumulated N*** - total number of packets that were fragmented since the channel opened. • ***Accumulated %*** - percentage of fragmented packets out of the total number of packets transmitted since the channel opened. • ***Interval N*** - number of fragmented packets received in the last RTP report interval (default interval is 5 minutes). • ***Interval %*** - percentage of fragmented packets out of the total number of packets transmitted in the last RTP report interval (default interval is 5 minutes). • ***Peak*** - the highest number of fragmented packets in a report interval from the beginning of the channel's life span.
RTP Statistics - Jitter Mechanism	The values this information provides may indicate problems with the network which can affect the audio and video quality.
Jitter Buffer Size	The maximum permitted delay in milliseconds in the expected arrival time (buffer size) determining whether packets are processed or considered as lost. For example, if the jitter buffer size is 15-milliseconds and a packet from an endpoint arrives with a 12-millisecond delay, the packet is processed. • ***N*** - the current jitter buffer size. • ***Peak*** - the highest jitter buffer size from the beginning of the channel's life span.

Table 5-17: IP Participant Properties - Video In Channel Info (Continued)

Field/Option	Description
Late Packets	The number of packets discarded as a result of arriving later than the set jitter buffer size. • ***Accumulated N*** - total number of packets that arrived later than set in the jitter buffer size since the channel opened. • ***Interval N*** - number of packets that arrived later than set in the jitter buffer size, in the last RTP report interval (default interval is 5 minutes). • ***Peak*** - the highest number of packets that arrived later than set in the jitter buffer size, in a report interval from the beginning of the channel's life span.
Overflows	The number of times the jitter mechanism is reset due to bitrate overflow. Overflow is the excess flow of packets not processed. High values may indicate a problem with the network or an endpoint.
Sample packet interval	The time a packet is delayed in the jitter buffer until it is used. (This information is used as part of a random sampling procedure for internal behavior tracking.)
Error Resilience	Indicates the state of the RTP mechanism that repairs video frames resulting from packet loss, to improve video quality.
Repairs (video only)	The number of repaired packets.

3. Click the **Connection Info2** tab.
The *Participant Properties - Connection Info2* dialog box opens.

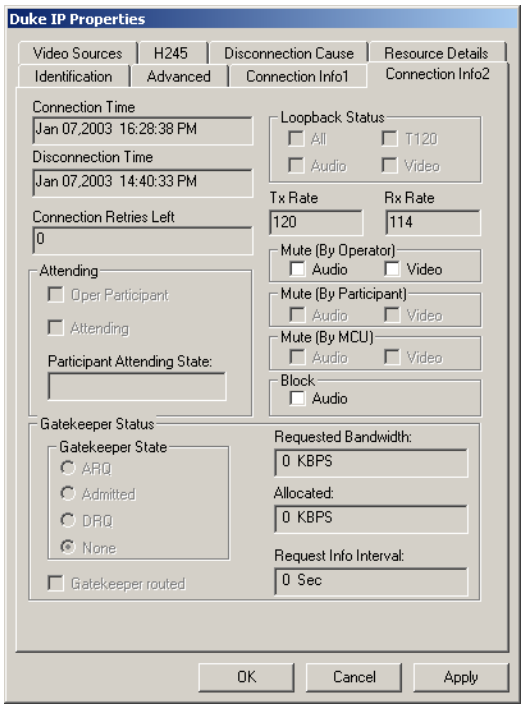


Table 5-18: IP Participants Properties - Connection Info2 Parameters

Field	Description
Connection Time	The date and time the participant connected to the conference.
Disconnection Time	The date and time the participant was disconnected from the conference.
Loopback Status	For future version.
Connection Retries Left	Indicates the number of retries left for the system to connect the participant to the conference.

Table 5-18: IP Participants Properties - Connection Info2 Parameters

Field	Description
Tx Rate	The total line rate of all the channels (agreed rate) in which data sent from the MCU is received by the endpoint.
Rx Rate	The total line rate of all the channels (agreed rate) in which data sent from the endpoint is received by the MCU.
Mute (By Operator)	When checked by the operator, mutes the participant's audio or video transmission to the conference **Note:** The *Video Mute* option may be disabled in the system.cfg and will not be applied, even if checked here.
Mute (By Participant)	When checked, indicates that the participant has muted the audio and/or video transmissions from the endpoint to the conference.
Mute (By MCU)	If checked, indicates that the audio and/or video transmissions from the endpoint have been muted by the MCU (as in the Exclusive Speaker mode or in a Lecture Show).
Block	When checked, the audio transmission from the conference to the participant's endpoint is blocked, but the participant will still be heard by other participants.
Attending	Displays the participant or operator status in an Attended conference (IVR-enabled or Greet and Guide). • ***Oper Participant*** - This option is checked when viewing the operator parameters. • ***Attending*** - This option is checked when the participant is in an Attended state.

Table 5-18: IP Participants Properties - Connection Info2 Parameters

Field	Description
Participant Attending State	Displays the status of the Attended participant: • ***Attended*** - The participant is being assisted by the operator (in an Operator conference) • ***On Hold*** - The participant was placed on hold and hears background music. In video conferences, the participant also views the Welcome slide. For more details on Attended conferences, see the *MGC Manager User's Guide Volume II, Chapter 4*.
Gatekeeper Status	Indicates the status of the participant's registration with the gatekeeper and the bandwidth allocated to the participant. ***ARQ*** – Admission Request - indicates that the participant has requested the gatekeeper to allocate the required bandwidth on the LAN. ***Admitted*** – indicates that the gatekeeper has allocated the required bandwidth to the participant. ***DRQ*** – Disengage Request – the endpoint informs the gatekeeper that the connection to the conference is terminated and requests to disconnect the call and free the resources. ***None*** – indicates that there is no connection to the gatekeeper.
Requested Bandwidth	The bandwidth (in Kbps) requested by the participant from the gatekeeper in the *Admission Request*.
Allocated	The actual bandwidth (in Kbps) allocated to the participant by the gatekeeper when the participant is admitted to the conference.
Requested Info Interval	Some gatekeepers request an *alive and well* message from the endpoint to keep the resources allocated to it. This box indicates the frequency with which this message is sent to the gatekeeper.
Gatekeeper Routed	Indicates whether the participant's call is routed via the gatekeeper.

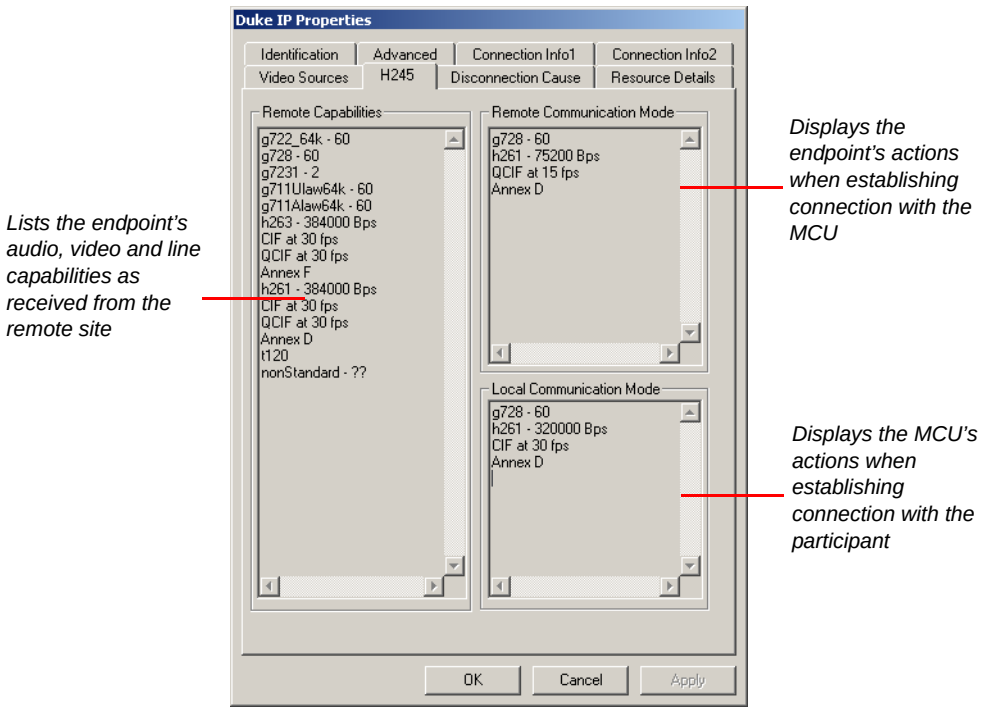
4. If the participant is in a Continuous Presence conference, click the **Video Sources** tab to check the video layout selected for this participant.

   The *Participant Properties - Video Sources* dialog box opens.

   This dialog box displays the participant's video layout and video forcing settings (the participants that are forced to each of the layout windows). For information about this dialog box, see "ISDN Participant Properties - Video Sources" on page 5-50.

5. If problems are indicated during the participant's connection process to the conference, and you want to further investigate the reasons, click the **H245** tab.

   The *Participant Properties – H245* dialog box opens.



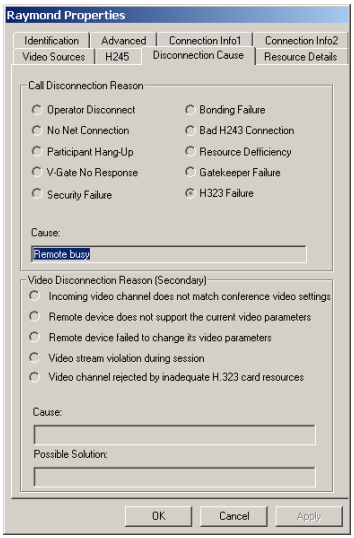
   This dialog box indicates the capabilities exchanged between the MCU and the endpoint.

The following information is displayed in the *H245* tab:

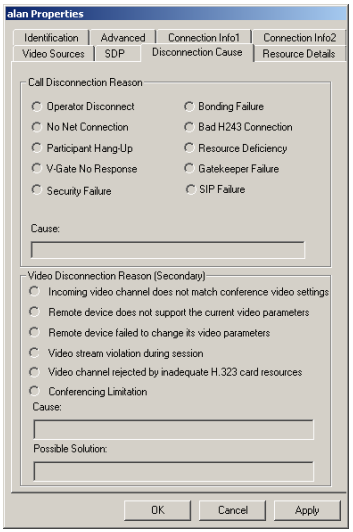
Table 5-19: IP Participant Properties - H.245

Parameter/Field	Description
Remote Capabilities	Lists the participant's Line Rate and Audio/ Video capabilities as received from the remote site.
Remote Communication Mode	Displays the actual capabilities used by the endpoint when establishing the connection with the MCU.
Local Communication Mode	Displays the actual capabilities used by the MCU when establishing the connection with the participant.

6. Click the **Disconnection Cause** tab to view the causes for the participant's inability to connect to the conference.
The *Participant Properties - Disconnection Cause* dialog box opens.



H.323 Participant Properties - Disconnection Causes



SIP Participant Properties - Disconnection Causes

The following information is contained in the *Disconnection Cause* dialog box.

Table 5-20: H.323 and SIP Participant Properties - Disconnection Causes

Pane Name	Category and Description	
Call Disconnection Reason	The disconnection category.	
Call Disconnection Reason (cont.)	*Operator Disconnect*	The operator disconnected the participant from the conference. The *Cause* field displays the name of the operator who disconnected the participant.
	No Net Connection	The network channels could not be connected. This may also be caused when the communication lines are unavailable or busy.
	Participant hang up	The participant disconnected from the conference.
	V-Gate No Response	Applicable in an ATM connection, when the V-Gate is unable to negotiate a connection with the endpoint.
	Security Failure	An encryption failure occurred.
	Bonding Failure	The connection could not be established between the participant and the MCU when Bonding is used.
	Bad H243 Connection	Problems with the connection protocol.
	Resource Deficiency	Not enough hardware resources (MUX, video, audio, data or network cards) to handle the participant call.

Table 5-20: H.323 and SIP Participant Properties - Disconnection Causes

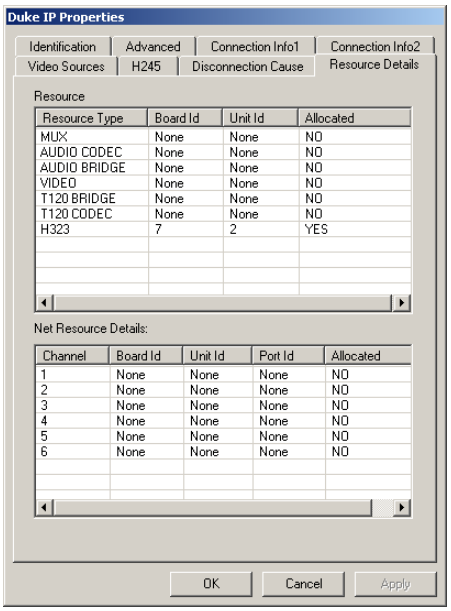
Pane Name	Category and Description	
	Gatekeeper Failure	The participant's failure to connect to the conference is caused by the gatekeeper.
	H323 Failure	The participant's failure to connect to the conference is caused by the MCU (H.323 card).
Call Disconnection Reason (cont.)	*SIP Failure*	The participant cannot connect to a conference that does not support SIP participant connections.
Cause	If there is a problem in the connection, which is indicated by one of the call disconnection reasons, the system displays an explanation for this problem. For a detailed description of disconnection causes and parameters, see Appendix A.	
Video Disconnection Reason (Secondary)	Describes those cases where a participant's video cannot be connected and the participant is using only the audio channel. The detailed cause is indicated in the *Cause* box with a *Possible Solution* displayed beneath.	
	Incoming video channel does not match conference video settings	During the capabilities exchange between the endpoint and the MCU, the endpoint capabilities do not support the capabilities required by the MCU. For example, the conference Video protocol is set to H.263 while the endpoint supports only H.261. In the *Cause* box, the system lists the conference video parameters and the endpoint's video parameter that does not match the conference.

Table 5-20: H.323 and SIP Participant Properties - Disconnection Causes

Pane Name	Category and Description	
Video Disconnection Reason (Secondary) (cont.)	*Remote device does not support the current video parameters*	During the connection to the conference, the endpoint fails to adjust (lower) its video settings to the conference settings. For example, when the conference frame rate is set to QCIF, the endpoint sends video in CIF and cannot lower the video resolution to QCIF.
	Remote device failed to change its video parameters	In a Video Switching conference with video parameters set to *Auto* (activating the highest common mechanism), when the conference video parameters are adjusted according to the participants currently connected to the conference, the participant's endpoint could not adjust its video parameters. Consequently, the connection status changed to Secondary.
	Video stream violation during session	The endpoint's video parameters exceed the parameters set for the conference. For example, if the conference frame rate is set to 15 fps and the endpoint sends video at 30 fps (frames per second), the endpoint is connected as Secondary.
	Video channel rejected due to inadequate H.323 card resources	The resources of the H.323 card were insufficient for the participant's video channel.
	Conferencing Limitation	Video connection for SIP participant is temporarily unavailable.

7. Click the **Resource Details** tab to view the MCU resources allocated to the participant.

   The *Participant Properties – Resource Details* dialog box opens.


Duke IP Properties
Identification
Advanced
Connection Info1
Connection Info2
Video Sources
H245
Disconnection Cause
Resource Details
Resource
Resource Type | Board Id | Unit Id | Allocated
MUX | None | None | NO
AUDIO CODEC | None | None | NO
AUDIO BRIDGE | None | None | NO
VIDEO | None | None | NO
T120 BRIDGE | None | None | NO
T120 CODEC | None | None | NO
H323 | 7 | 2 | YES
Net Resource Details:
Channel | Board Id | Unit Id | Port Id | Allocated
1 | None | None | None | NO
2 | None | None | None | NO
3 | None | None | None | NO
4 | None | None | None | NO
5 | None | None | None | NO
6 | None | None | None | NO
OK
Cancel
Apply

   The following information is displayed:

   Board ID – the number of the slot where the IP card used to handle the participant is installed.

   Unit ID – Displays the unit number (on the card) used to handle the participant in the conference.

   Allocated – Indicates whether the IP card is used to run the conference or not.

   All other resources are identical to ISDN participants and are described in *Table 5-14 on page 5-51*.

Monitoring Gateway Sessions

If a gateway is configured on your MCU, you can monitor the On Going gateway sessions.

To view the list of current gateway sessions:

- Double-click the **On Going Gateway Sessions** icon or click the plus [+] icon next to the *On Going Gateway Sessions* icon.
  The list of gateway sessions opens.

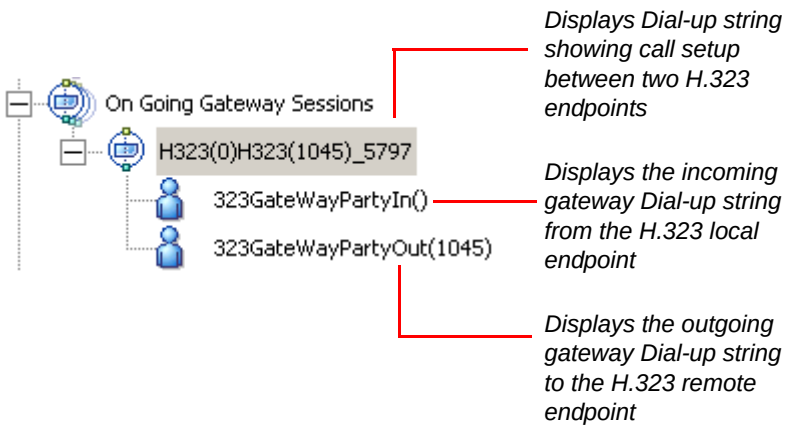

On Going Gateway Sessions
H323(0)H323(1045)_5797
323GateWayPartyIn()
323GateWayPartyOut(1045)
Displays Dial-up string showing call setup between two H.323 endpoints
Displays the incoming gateway Dial-up string from the H.323 local endpoint
Displays the outgoing gateway Dial-up string to the H.323 remote endpoint

Figure 5-2: Gateway Sessions Indicators

Figure 5-2 shows a gateway call between two IP networks. The dialing string is composed of the H.323 Network Service prefix (GW Service prefix), the profile identifier, and the remote H.323 endpoint's alias in E.164 format (1045). The system displays the alias of the remote H.323 endpoint in the gateway session name, and the participant name.

The same status icons that indicate the standard participant status, are used to indicate the participant status in a gateway session. For the description of all conference status icons, see *Table 5-2 on page 5-10*.

In a Double Gateway call, the system displays only the **local** endpoint and gateway session parameters.

To view the participants status in the gateway session:

- Double-click the conference icon or click the plus [+] icon next to the gateway session.
  The list of participants of the gateway session opens.

In Figure 5-3 the IP participant dials the GW Service prefix, the pound sign # and the ISDN phone number of the H.320 endpoint. The system displays the phone number of the ISDN participant (293711111) and the alias of the H.323 endpoint initiating the gateway session. The same numbers appear as the participant names.

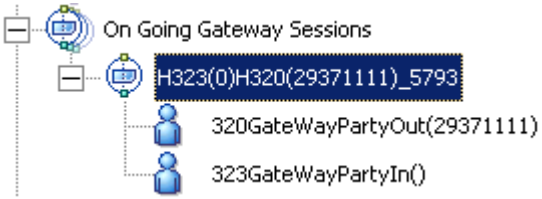


Figure 5-3: Gateway Session - H.323 Participant Status Indicators

As shown in Figure 5-4, the H.320 endpoint dials to an H.323. The dialing string is comprised of the MCU ISDN dial-in number (one of the numbers allocated to gateway calls) and the H.323 alias (in E.164 format). The H.323 is entered as the extension number and is sent to the gateway in TCS4 format. The system displays the ISDN endpoint's CLI number (or NOCLI if no CLI number is detected) as part of the gateway session name and the ISDN participant name.

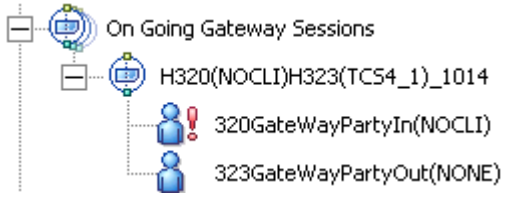


Figure 5-4: Gateway Session - ISDN Participant Status Indicators

6

Operations Performed During On Going Conferences

During an On Going Conference, the operator can perform many management tasks at the conference level or at the participant level, using the MGC Manager or the WebCommander application.

Operations at the participant level affect individual connections, while those at the conference level affect all participants of the conference. Some conference-level operator's actions affect individual participants, for example when during a Q&A (Question-and-Answer) session they grant individual participants permission to ask questions and add them to the queue.

Operators can terminate a conference before the originally scheduled ending, or extend its duration. Alternatively, they can disconnect an individual participant while the conference is in progress, or temporarily mute the transmission to enable other participants to hold a private discussion. Operators can manage video sources, establish an operator-controlled dial-out connection during the conference and add new participants while the conference is in session.

Some conference management tasks can also be performed by chairpersons from their endpoint, using DTMF codes or the WebCommander application.

This chapter describes the activities and options available to the operator or the chairperson during an On Going Conference.

Overview

The MGC Manager operator performs different roles during attended and unattended conferences.

Attended Conferences

In attended conferences, participants accessing an Entry Queue, an IVR Queue or a Greet and Guide Queue are moved to the Participants Queue where they wait for the operator to assist them. The operator's role during this stage is to move the participants from the Participants Queue to the destination conference. During an On Going Conference, the operator can take part in the conference and perform various tasks, for example assist participants privately; conduct a voting session; manage a Question-and Answer session; place participants on hold, and lock the conference to dial-in participants.

Unattended Conferences

In unattended conferences, participants use DTMF codes in response to menu-driven voice prompts and in this way are guided to the conference. Unless there is a problem in the connection or the participant did not enter the correct conference Numeric ID or password, operator intervention is not required. In unattended conferences the operator usually leaves the management of the conference to a designated participant, usually the chairperson/meeting organizer. The conference chairperson can perform certain operator's functions, such as start a voting session, control the Question-and-Answer session, mute incoming parties, place the conference on hold and lock or unlock the conference.

All operator functions can be performed either via the WebCommander interface or using DTMF codes from the participant's endpoint.

Participant Level Operations

The following operations can be performed at the participant level:

- Make dial-out connections
- Change the participant connection type (dial-in/dial-out)
- Change the participant's Line Rate before connection to the conference
- Disconnect and reconnect participants
- Change the properties of a disconnected participant
- Downspeed

- Name undefined dial-in participants
- Move participants from one conference to another (using the drag and drop option or the participant menu)
- Move a participant to the Operator conference (only in an Attended Conference - see Chapter 8, "Entry Queues, Operator Conferences, and Attended Conferencing")
- Move a participant to the Home conference (only in an a Attended conference - see Chapter 8, "Entry Queues, Operator Conferences, and Attended Conferencing")
- Place a participant on-hold (only in an a Attended conference - see Chapter 8, "Entry Queues, Operator Conferences, and Attended Conferencing")
- Designate a participant as Exclusive Speaker
- Change a participant's status to Conference Chairperson
- Designate a participant as a VIP
- Modify the participant's *User Defined* fields information (MGC Manager only)
- Control the participant's listening and broadcasting volume
- Mute or unmute the participant's audio and video channel
- Block the transmission of the audio channel to the participant's site
- Enable Auto Gain Control (AGC) function
- Perform participant operations via DTMF Codes

Participant and Conference Level Video Management

- Change the conference and participant Video Layout in a Continuous Presence conference
- Video Force at the conference and the participant level

Conference Level Operations

The following operations can be performed at the conference level:

- Add new participants to a conference
- Mute dial-in participants upon their connection to the conference
- Mute audio for a conference
- Lock and unlock a conference

- Change the conference and chairperson password
- Change a conference's duration
- Enable the end of conference reminder
- Change the conference billing code
- Modify conference *User Defined* fields information (MGC Manager only)
- Add remarks
- Enable broadcasting of Annex D still video image to all participants (in Transcoding and Continuous Presence conferences)
- Print the conference details to a file, printer or clipboard
- Control the Question-and-Answer session
- Conduct Voting sessions
- Place a conference on hold (Audio Only conferences only - see the *MGC Manager User's Guide, VoicePlus Edition*)
- Perform chairperson operations via DTMF Codes
- Invite participants to the conference

Operations performed during On Going Audio Only Conferences are described in the *MGC Manager User's Guide, VoicePlus Edition, Chapter 3, "Managing Audio Only Conferences".*

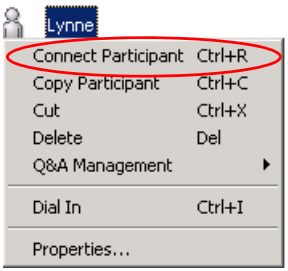
Participant Level Operations

Connecting and Reconnecting Dial-Out Participants

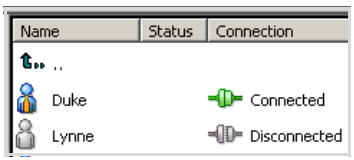
When the *Dial-Out Manually* option is selected for the conference, the operator has to manually connect dial-out participants to the conference. Sometimes, when the connected participant is accidentally disconnected from the conference, the operator has to manually re-connect the participant to the conference.

To establish a dial-out connection:

1. In the *Monitor* pane, *Status* pane or *Browser* pane, list the conference participants.
2. Right-click the participant icon to connect to the conference, and then click **Connect Participant**.



Wait for the connection to be established. During the connection process, the participant's status, which is displayed in the *Status* column, changes from *Standby* to *Connecting* and the *Connection* icon is displayed in the *Connection* column. When the connection is established, the participant's status is indicated in the Status column of the Status pane and the *Connection* icon changes from *Disconnected* to *Connected*.



3. Repeat steps 1 and 2 for each participant to be manually connected to the conference.

- Use this procedure to reconnect participants who were previously disconnected from the conference or failed to connect to the conference.
- If you have difficulties connecting dial-out ISDN participants, make sure that the specific switch used for the connection does not require the addition of the pound key (#) at the end of the dial string. If it does, modify the properties of the disconnected participant.

For listing of all participant connection status icons, see Chapter 5, ”Monitor Pane Information” on page 5-10.

Changing the Participant Connection Type (Dial-In/Dial-Out)

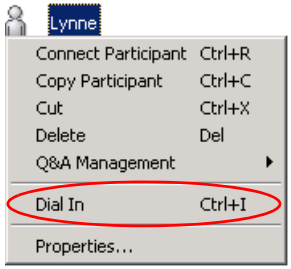
Sometimes you need to change the connection type used by the participant to connect to the conference. For example, when the participant cannot dial in and you want the MCU to dial to the participant. You can toggle between the dial-in and dial-out connection type, using the *Participant Properties - Identification* dialog box, or from the Participant right-click menu.

- The *Connection Type* parameter can be changed only when the participant is disconnected from the conference and both dial-in and dial-out parameters are defined in the *Participant Properties - Identification* dialog box.
- If the dial-in phone numbers are not defined for the ISDN participant when switching to dial-in and the *Meet Me Per* option is set to **MCU - Conference**, the system automatically allocates the appropriate phone numbers from the list of dial-in numbers defined in the ISDN Network Service that was selected for participants.
- If the *Meet Me Per* option is set to **Party** or **Channel**, and no CLI number is defined for the participant, the system will reject the participant’s call.

To toggle between Connection Types:

1. In the *Monitor* pane, *Status* pane or *Browser* pane, list the participants defined for the conference.

2. Right-click the participant's icon whose connection type needs to be changed, and then click **Dial In** or **Dial Out** (depending on the participant's current definition) to select the desired connection type.



The system toggles between dial-in and dial-out depending on the current participant connection type.

Changing the Participant's Line Rate Before Connection

You can modify the line rate for a disconnected ISDN participant to connect to the conference when there is a problem connecting the participant with the defined line rate.

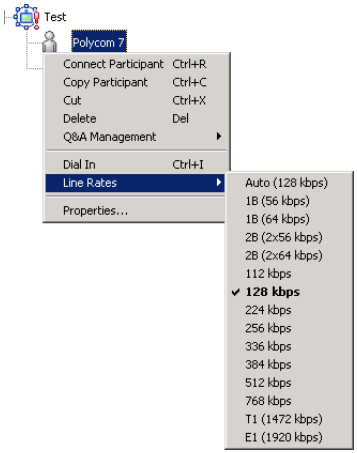
This option is available in the *Participant Properties - Advanced* dialog box, or from the participant's right-click menu.

- The right-click menu option is available only to ISDN/ATM participants in CP Classic mode.
- In the Video Switching mode, the line rate of all participants must be the same.

To change the line rate from the Participant right-click menu:

1. Expand the *On Going Conferences* or the *Reservations* list.
2. Expand the On Going Conference tree to display its participants.

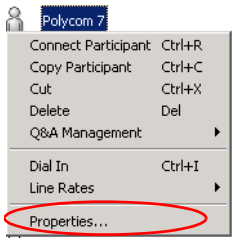
3. In the *Monitor* pane, *Status* pane or *Browser* pane, right-click the icon of the participant to connect, click **Line Rates**, and then select/check the desired line rate from the *Line Rates* list.



The participant (endpoint) will connect to the conference using the selected line rate.

To change the line rate from the Participant Properties – Advanced tab:

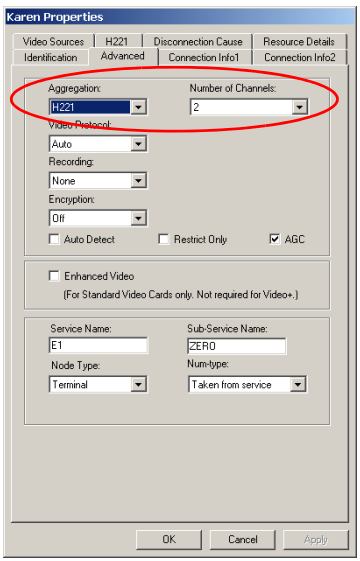
1. In the *Monitor* pane, *Status* pane or *Browser* pane, right-click the icon of the disconnected participant, and then click **Properties**.



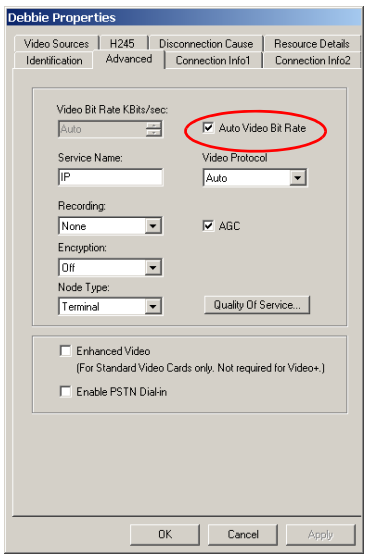
The *Participant Properties - Identification* dialog box opens.

2. Click the **Advanced** tab.

The *Participant Properties - Advanced* dialog box opens.



ISDN Participant



IP Participant

a. For an ISDN participant, adjust the line rate by selecting the settings in the *Aggregation*, and *Number of Channels* fields.

b. For an IP participant, clear the *Auto Video Bit Rate* check box, and enter the required line rate in the *Video bitrate* box.

3. Click **OK**.

Disconnecting and Deleting Participants

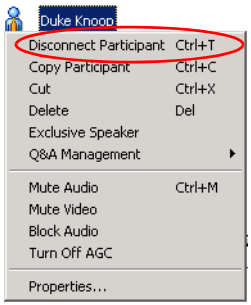
On occasion, a participant may not need to continue with the conference. In such a case, you can remove a participant from the conference by:

- Disconnecting the participant
- Deleting the participant

When you disconnect a participant, resources remain allocated to that participant and the defined properties are retained by the system's memory, therefore you can easily reconnect the participant if necessary. This is useful when participants wish to discontinue temporarily with intention to return to the conference at a later stage. Deleting a participant completely removes all participant information from the conference and releases the resources that were allocated to that participant. Therefore, to reconnect a participant who was deleted from the conference, you have to define the parameters again as you would do for a new participant.

To disconnect a participant:

1. In the *Monitor* pane, *Status* pane or *Browser* pane, list the participants connected to the conference.
2. Right-click the icon of the participant to disconnect, and then click **Disconnect Participant**.
   The participant is disconnected from the conference.



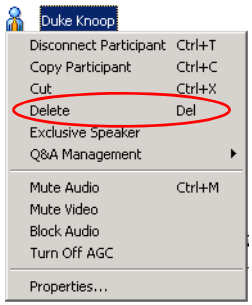
The status *Disconnected* appears in the *Status* column next to the participant's name and the appropriate icon is displayed in the *Connection* column.

To reconnect a disconnected participant, right-click the participant icon, and then click **Connect Participant**. For details, see "Connecting and Reconnecting Dial-Out Participants" on page 6-5.

To delete a participant:

When a participant no longer needs to be part of a conference and there is no intention to reconnect, you can delete the participant from the conference. This action also releases the resources allocated to a participant.

1. In the *Monitor* pane, *Status* pane or *Browser* pane, list the participants connected to the conference.
2. Right-click the participant icon, and then click **Delete**.



A message appears, requesting you to confirm the deletion process.

3. Click **Yes** to delete the selected participant.
   The participant's name disappears from the participants list in the *Monitor*, *Status* and *Browser* panes. To reconnect a participant who has been deleted from a conference, you must add the participant to the conference as a new participant.

Changing the Properties of a Disconnected Participant

You can change several properties of a defined participant who is disconnected before reconnecting that participant.

The following participant properties may be modified in the *Properties* dialog box tabs:

- **Name** - Modify the automatically assigned name to the undefined dial-in participant's real name to correctly display it in the *Monitor* and *Status* panes. You can also modify the defined participant's name. Participant name is also included in the CDR file which is used for billing. For more detail about naming undefined Participants, see *"Naming Undefined Dial-in Participants" on page 6-13*.
- **Connection Type** - Alter the participant connection from dial-in to dial-out or vice versa.
- **Phone Number or IP address** - Change the participant's dial-in/dial-out phone number or IP dress as required.
- **Interface Type** - Change the participant's interface (and protocol), provided that the endpoint supports both ISDN and IP.
- **VIP status** - Change the participant' status from or to VIP.
- **Participant State** - Reconnect the participant.
- **Mute (By Operator)** - Mute or unmute the participant audio and/or video channel.
- **Service Type** - Change the name of the Network Service used to connect the participant.
- **AGC** - disable AGC when required (enabled is the default)
- **Recording** - Change from a standard participant to a participant used for recording the conference audio channel.

Naming Undefined Dial-in Participants

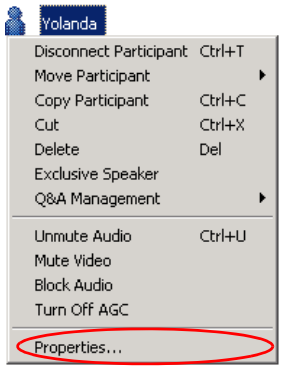
Dial-in participants, who were not defined prior to the conference start (undefined participants) are automatically named by the system when connecting to the conference. This default name is derived from the conference name and a sequential number.

You can modify the automatically assigned name to the participant's real name to correctly display it in the *Monitor* and *Status* panes. The name change is updated in the Call Detail Record (CDR) which is used for billing. Usually an operator will change the name while attending the participant (in the Operator conference).

You can also change the name of the participants who are waiting in the Entry Queue (set to *Attended* mode) or when they are connected to the conference.

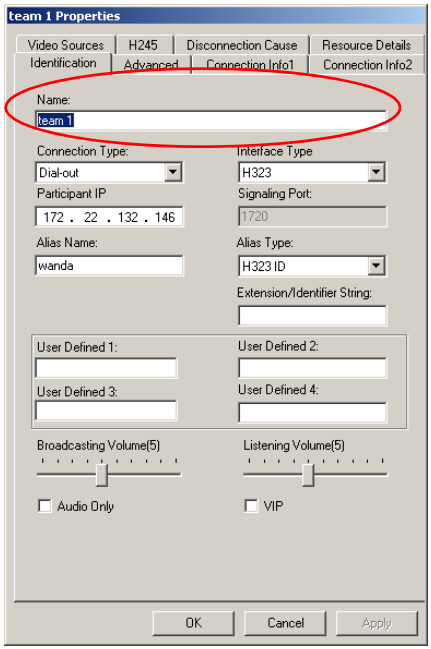
To name an Undefined dial-in participant:

1. List the participants in the Operator conference, in the On Going Conference or in the Participants Queues.
2. Right-click the participant icon, and then click **Properties**.



The *Participant Properties - Identification* dialog box opens.

3. In the *Name* field, type the participant's new name.



4. Click **OK**.
The participant name is updated in the *Browser*, *Monitor* and *Status* panes. This name will also be saved to the CDR (Call Detail Record) file.

Moving Participants Between Conferences

MGC Manager enables the operator to move one or more participants from one On Going Conference to another. Moving can be done either interactively - by drag-and-drop, or from the participant's right-click menu. However, differing resource requirements of the two conferences as well as the defined capabilities of the participant endpoints have to be taken into account.

Guidelines for moving participants

- It is only possible to move participants between On Going Conferences that are controlled by the same MCU and are run by the same type of audio and video card. For example you cannot move a participant with the Audio+ card capability to a conference where participants have only the Standard Audio card capability.
- VoIP participants can be moved to any conference that is running on an Audio+ card.
- In video Transcoding or Continuous Presence conferences, participants can be moved between conferences, unless:
  - The destination conference uses video Annexes which are not used in the source conference.
  - The destination conference is set to one of the Dual Stream options.
- In Video Switching conferences, participants can be moved between conferences if both the source and the destination conference have the same line rate and video settings.
  - When the video protocol is set to *Auto*, it enables the dynamic adjustment of the highest common video in Video Switching conferences. Therefore, when moving a participant using the H.263 or H.264 video protocol to a conference that was set to *Auto* video protocol, the system will automatically adjust the video protocol of that participant to the one currently set for the destination conference.
- H.239/P+C is not supported when participants are moved between conferences or, in Attended Conferencing, when participants are moved from the Operator conference to another conference.
- FECC is not supported when participants are moved between conferences or, in Attended Conferencing, when participants are moved from the Operator conference to another conference.

- SIP participants cannot be moved to/ from a COP conference or from an Entry Queue to a COP conference. They must connect directly to the COP conference.

To interactively move a participant from one conference to another:

1. Expand the *On Going Conferences* list in the *Browser* pane, to display the source conference icon and the destination conference icon.
2. Drag the icon of participant from the source conference and drop it on the icon of the destination conference.

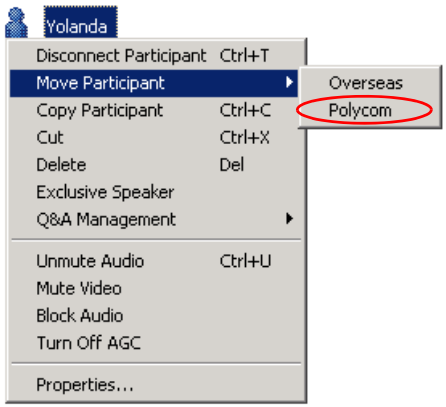
To move several participants at the same time, click the icons of the participants to move while pressing down the <Shift> or <Ctrl> key. Then drag and drop them on the destination conference icon.

The *Drag Confirmation* dialog box opens.

3. Click **Yes** to confirm the action.
   The participant is moved to the destination conference.

To move a participant to another conference using the right-click menu:

1. In the *Browser, Monitor or Status* pane, expand the participants list in the source conference.
2. Right-click the icon of the participant you want to move, click **Move Participant**, and then click the name of the destination conference from the list of active conferences.



The participant is transferred to the selected destination conference.

To move several participants together:

1. Using the standard Windows conventions, select the icons of the participants to move.
2. While the list is highlighted, right-click one of the participants icons, click **Move Participant** to open the list of active conferences, and then click the name of the destination conference to which to move the participants.
   The selected participants are transferred to the selected destination conference.

Designating an Exclusive Speaker

During On Going Conferences, you can designate one participant as the conference lecturer/speaker. All other participants are automatically muted so they do not interrupt the lecture. Alternatively, the chairperson can designate themselves as the conference Exclusive Speaker by entering the DTMF code assigned to this function (the default code is *5) on the DTMF input device (usually remote control). For more about DTMF codes, see “Using DTMF Codes During a Conference” on page 6-88.

To designate a participant as the conference Exclusive Speaker:

- In the *Browser* pane, the *Monitor* pane or the *Status* pane of the main window, right-click the participant's icon, and then click **Exclusive Speaker**.

The selected participant becomes the conference speaker and all the other participants are automatically muted by the system.

The *Exclusive Speaker* icon is displayed in the *Audio* column in the *Monitor* and *Status* panes.

The *Muted by MCU* icon is displayed in the *Audio* column of all other participants.

To cancel the Exclusive Speaker mode:

- In the *Browser* pane, the *Monitor* pane or the *Status* pane of the main window, right-click the participant's icon, and then click **Cancel Exclusive Speaker**.

  Alternatively, the chairperson can cancel the Exclusive Speaker mode by entering the DTMF code assigned to this function. The default code is <**#5**>.

Changing a Participant's Status to Conference Chairperson

During On Going Conferences, operators can designate a participant to function as the conference chairperson. The chairperson can perform various operations during the conference, such as lock or unlock the conference to undefined dial-in participants, initiate a voting session, become the conference exclusive speaker while muting all other participants and more.

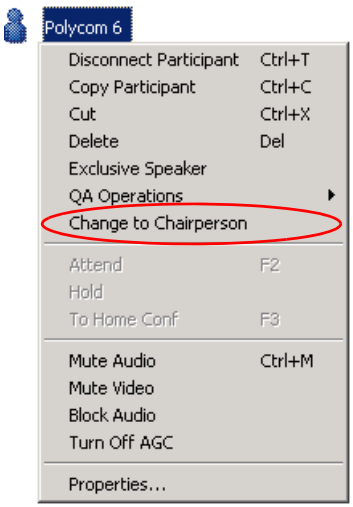
Participant can designate themselves as chairperson using a DTMF code (the default code is <***78**>). In this case, the system requests the participant to enter the Chairperson password in order to become the chairperson. If the participant entered an incorrect password, an audio prompt is played, indicating that the wrong password was entered and that the participant should re-enter the conference chairperson password.

Participants can be designated as Chairpersons by the Operator from the MGC Manager when the *Conference Chairperson* option is enabled in the IVR Service assigned to their conference.

Participants can designate themselves as Chairpersons using the appropriate DTMF code as defined for the IVR Service assigned to their conference.

To change a participant's status to conference chairperson in the MGC Manager:

- In the *Browser* pane, the *Monitor* pane or the *Status* pane of the main window, right-click the participant's icon, and then click **Change to Chairperson**.



The selected participant becomes the conference chairperson and the Chairperson icon is displayed next to the participant name.

To revert the chairperson's status to regular participant:

- In the *Monitor* pane or the *Status* pane of the main window, right-click the chairperson's icon, and then click **Change to Regular Participant**. The Chairperson's icon changes to the *Standard Participant* icon.

Designating a VIP Participant

During an On Going Conference, you can designate a participant who requires preferential attention during the conference. This designation is the *VIP* status. However, the *VIP* status does not change the role of the participant.

VIP participants are indicated with the *VIP* icon.

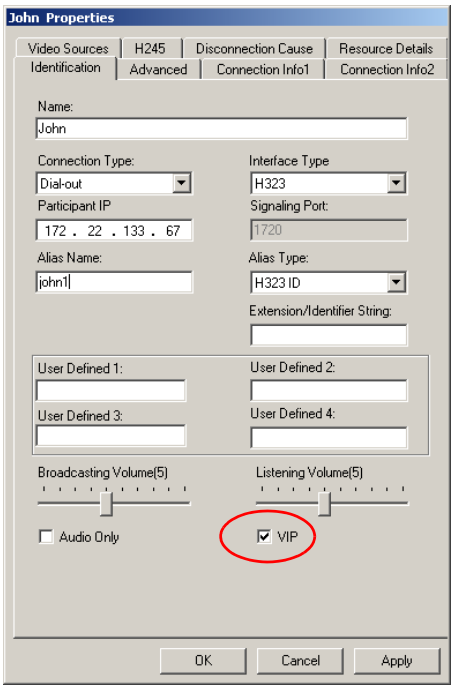
To designate a participant as VIP:

1. In the *Browser* pane, the *Monitor* pane or the *Status* pane of the main window, right-click the participant's icon, and then click **Properties**.

   The *Participant's Properties* dialog box opens.

2. Click the **Identification** tab.
   The *Participant's Properties - Identification* dialog box opens.

3. Select the **VIP** check box to assign the new status to the participant, and then click **OK**.



The selected participant becomes a VIP in the On Going Conference, and the *VIP* icon appears in the *Name* column.

To revert from the VIP status to regular participant:

1. In the *Browser* pane, the *Monitor* pane or the *Status* pane of the main window, right-click the participant's icon, and then click **Properties**.
   The *Participant's Properties - Identification* dialog box opens.
2. Clear the **VIP** check box, and then click **OK**.
   The selected participant reverts to a regular participant, and the *VIP* icon is replaced by the *Standard Participant* icon.

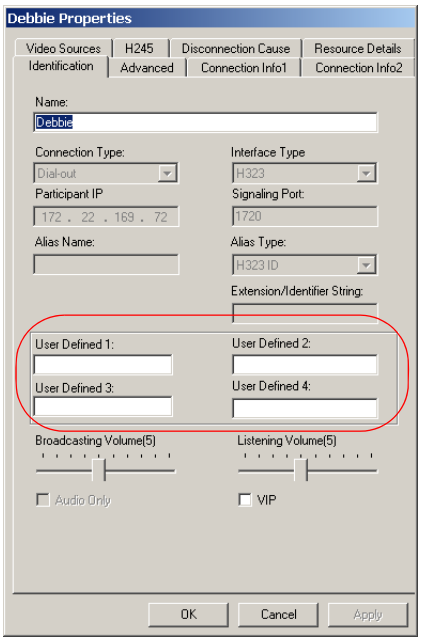
Modifying a Participant's User Defined Properties

In the *Participant Properties - Identification* dialog box *User Defined* fields 1, 2, 3 and 4, you can enter (or edit) additional information that identifies the participant, such as the E-mail address, company name or job title. You can also change the titles of the User Defined fields as required. These fields are displayed by default, however if you do not see them, you can configure the dialog box to include them. This is done in the *Database Manager* application.

The User Defined fields *Participant Properties - Identification* are displayed only if the **Show User Defined Fields** in *Conference Properties* option is selected in the *Database Manager -> User Defined Defaults*. For more details about loading the User Defined field titles, see Chapter 3, "Loading the User Defined Default Set to the MGC Manager Application" on page 3-31.

To modify User Defined fields:

1. In the *Browser* pane, the *Monitor* pane or the *Status* pane of the main window, right-click the participant's icon, and then click **Properties**. The *Participant's Properties - Identification* dialog box opens.
2. Enter general information about the participant into the *User Defined* fields, and then click **OK**.



The information is updated.

Adjusting the Broadcasting and Listening Volume

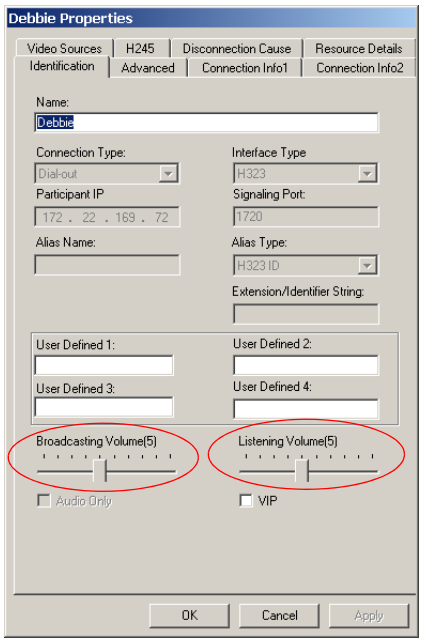
The broadcasting and listening volume of the participant's audio transmission can be changed during an On Going Conference. This operation is applicable to all interface types.

To adjust the broadcasting and listening volume for the participant:

1. In the *Browser*, *Monitor* or *Status* panes, right-click the participant's icon, and then click **Properties**. Alternatively, double-click the participant icon.

   The *Participant Properties* dialog box opens.

2. If required, click the **Identification** tab.
   The *Participant Properties - Identification* dialog box opens.



3. Move the slider to the right or to the left to adjust the audio volume. On the volume scale, 1 is the lowest and 10 is the highest volume. The Broadcasting and the Listening volume of each endpoint at the time of connection is set to 5. Each movement of the volume slider increases or decreases the volume by one unit, equivalent to 3 dB.

4. Click **OK**.

Participants in an On Going Conference can also control the volume of their endpoint from their endpoint, using DTMF codes.
The default DTMF code to increase the Broadcasting Volume is ***9** and to decrease - **#9**.
The new default DTMF code line to increase the Listening volume is ***76**, and to decrease **#76**.
See "Using DTMF Codes During a Conference" on page 6-88.

Muting/Unmuting Participant's Audio or Video

Occasionally, a conference organizer may want to exclude the audio or video channel of a participant from part of an On Going Conference.

You can mute a participant's audio and/or video channel via the participant's right-click menu or in the *Participant Properties* dialog box. A participant whose audio or video channel is muted hears and sees the other participants while the other participants cannot hear or see the muted participant. Alternatively, participants' audio channel can be muted from their own endpoints, through the endpoint application. (The default DTMF code for muting individual's audio transmission is ***6**, and **#6** for unmuting the line.)

- An endpoint muted by the operator remains muted until you unmute it.
- Disconnecting and reconnecting participants unmutes muted participants.
- Only connected participants can be muted.

The Video Mute functionality can be disabled to prevent operators from stopping the video transmission from the participant endpoint to the conference. The Video Mute functionality is disabled by manually adding the flag: *ALLOW_VIDEO_MUTE=NO* to the *system.cfg*, *GENERAL* section.

Since the feature is controlled from the system.cfg file, it does not affect the participant menus, toolbar and the Properties - dialog box. You will still be able to select Video Mute, however, the video right-click menu does not change to Video Unmute and the participant's video channel transmission will continue to be transmitted to the conference.

To mute a participant using the participant right-click menu:

- In the *Browser* pane, the *Monitor* or the *Status* pane, right-click the participant icon, and then click **Mute Audio** to mute the audio signal, or

Mute Video to suspend mute the video transmission from the endpoint to the conference.

Alternatively, to mute the audio channel, select the participant's icon, and then press the appropriate shortcut key combination (the default shortcut key combination is <**Ctrl**+**M**>).

The menu changes to *UnMute Audio*, or *UnMute Video* (respectively). The status of the audio channel in the *Audio* column in the *Status* and *Monitor* panes changes to "Mute Audio".

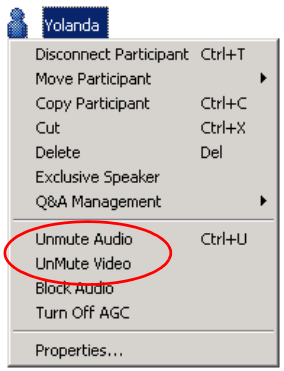
The status of the video channel in the *Video* column in the *Status* and *Monitor* panes changes to "Mute Video".

Muting is also indicated by an icon, or in the *Audio* or *Video* columns of the *Monitor* and *Status* panes.

To unmute a participant using the participant right-click menu:

- In the *Browser* pane, *Monitor* pane or the *Status* pane, right-click the participant icon, and then click **Unmute Audio** to unmute the audio

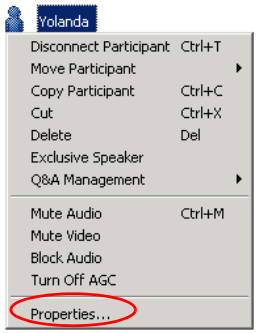
channel, or **Unmute Video** to resume the video transmission to the conference.



Alternatively, to unmute the audio channel, select the participant's icon, and then press the appropriate shortcut key combination (the default shortcut key combination is <**Ctrl**+**U**>).

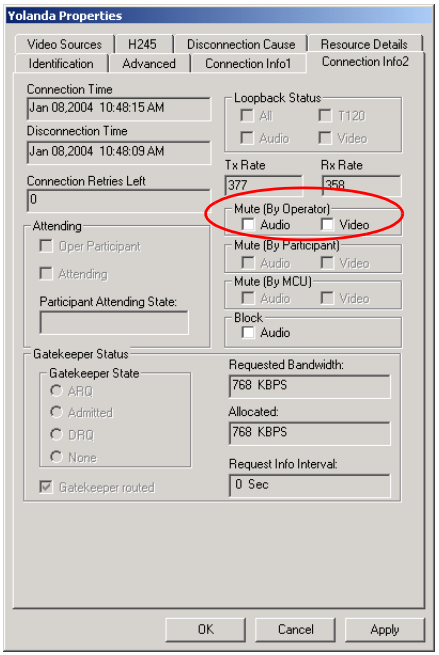
To mute a participant using the Participant Properties dialog box:

1. In the *Monitor* pane or the *Status* pane, right-click the participant icon, and then click **Properties**.



The *Participant Properties* dialog box opens.

2. Click the **Connection Info2** tab.
   The *Participant Properties - Connection Info2* dialog box opens.



3. In the *Mute (By Operator)* box, select the **Audio** check box to mute the audio channel, and/or select the **Video** check box to suspend the video transmission to the conference.
   A check mark appears in the selected check box.

4. Click **OK**.
   The dialog box closes. The icon for muted Audio or Video appears in the *Monitor* and *Status* panes of the main MGC Manager window.

To unmute a participant using the Participant Properties dialog box:

1. Repeat the steps for muting the participant, clearing the **Audio** or **Video** check boxes to resume the audio and/or video transmission to the conference.

2. Click **OK**.
   The dialog box closes. The icon for transmitted Audio or Video appears in the *Monitor* and *Status* panes of the main MGC Manager window.

For a detailed list of all status icons related to muting/unmuting the conference participants, see *Table 5-4 on page 5-22*.

Blocking/Unblocking Audio

You can block the audio transmission from the conference to a certain endpoint, preventing this participant from hearing the conference audio. Unblocking releases the audio to the endpoint. Blocking the audio sent to the endpoint does not mute the endpoint's audio and the other conference participants can still hear the participant. This feature is applicable only to video participants.

The audio transmission to a participant site can be blocked either in the participant right-click menu, the *Block* button on the *Participants* toolbar or in the *Participant Properties - Connection Info2* dialog box.

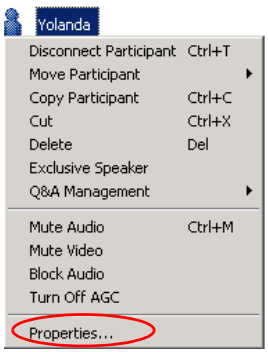
To block audio transmission to the participant sites:

1. In the *Browser* pane, *Monitor* pane or the *Status* pane, right-click the participant's icon, and then click **Block Audio**.

   The participant's audio icon in the *Audio* column in the *Monitor* and *Status* panes now indicates that the audio transmission to the participant's site is blocked.

2. Alternatively, block audio transmission to the participant site from the *Participant Properties - Connection Info2* dialog box:

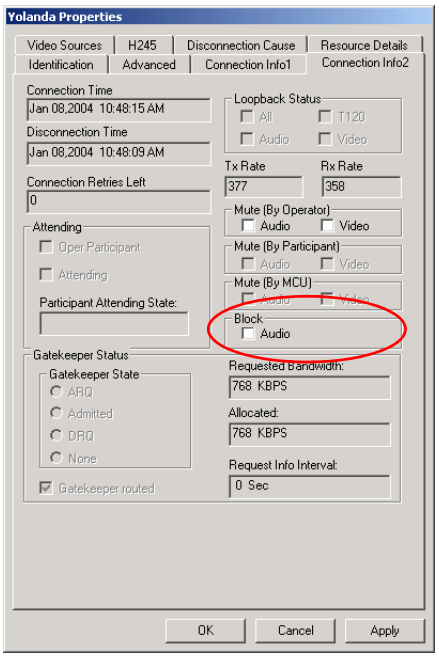
   a. Right-click the participant's icon, and then click **Properties**.



   The *Participant Properties* dialog box opens.

   b. Click the **Connection Info2** tab.

The *Participant Properties - Connection Info2* dialog box opens.



c. In the *Block* box, select the **Audio** check box.

d. Click **OK** to apply the changes.

To release a blocked site and resume audio transmission:

- In the *Browser* pane, *Monitor* pane or the *Status* pane, right-click the participant's icon, and then click **Unblock Audio**.

  Or:

- In the *Participant Properties - Connection Info2* dialog box, clear the *Block- Audio* check box and then click **OK**.
  The Audio transmission to the participant site is resumed.

Enabling/Disabling Auto Gain Control (AGC)

The Auto Gain Control (AGC) mechanism balances noise and audio volume of the received signals for all conference participants. Different endpoints and phones produce different types of source noise and volume. Auto Gain Control is applied to all incoming audio streams prior to mixing, and dynamically changes the amplification of the input signal to provide a constant output amplitude.

The intensity of input signals can vary due to the following factors:

- Microphone properties and adjustments
- Background noise
- Speaker's distance from microphone
- Speaker's manner of speech

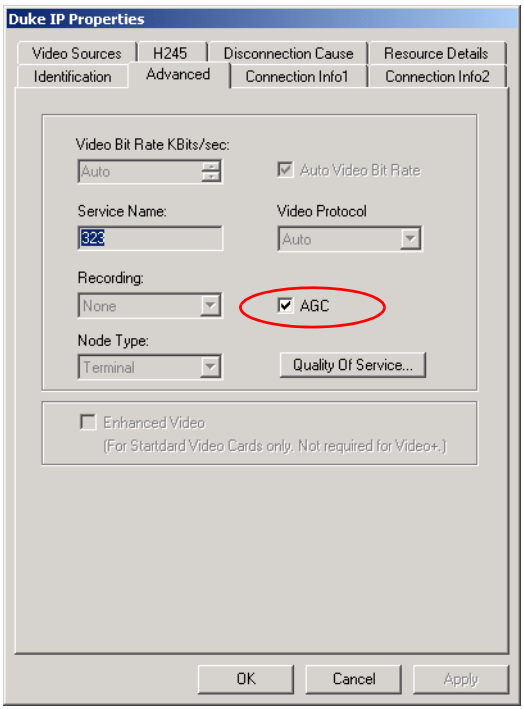
- The AGC option is applicable to all participants using Audio+ resources.
- The AGC option is enabled in the "system.cfg" in the AUDIO PLUS FLAGS section. By default, the AGC flag is set to YES, and when defining new participants, the AGC option is selected.

In some cases, you may need to disable AGC for a participant during the conference (if the line is too noisy and affects the quality of the audio achieved by the AGC mechanism). You can enable or disable AGC using the participant right-click menu or from the *Participant Properties* dialog box.

To disable AGC for an On Going Conference participant:

1. In the *Status* or *Monitor* panes, right-click the participant icon, and then click **Turn off AGC**.
2. Alternatively, disable AGC from the *Participant Properties* dialog box:
   a. In the *Status* or *Monitor* panes, right-click the participant icon.
   b. Click **Properties**.
   The *Participant Properties* dialog box opens.

c. Click the **Advanced** tab.



d. Clear the **AGC** check box to disable the AGC feature for this participant.

e. Click **OK** to apply the change.

Video Management Operations

Controlling the Video Layout

During the conference, operators can adjust several video layout parameters on the participant level and on the conference level.

Changing Video Layout for the Participant

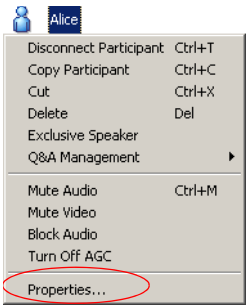
In Continuous Presence conferences, Personal Layout is a customized display layout that is viewed only by the participant for whom it was defined. Video display layouts available for the conference and Personal Layouts are determined by the type of the Continuous Presence mode that was selected for the conference at reservation stage (during the conference definition) - Classic or Quad Views. You can modify the Personal Layout for a participant using the following applications:

- *MGC Manager* - the operator selects the personal layout for a participant in the *Participant Properties - Video Sources* dialog box.
- *WebCommander* - the meeting organizer selects the personal layout for a participant in the On Going Conference window. For more information, see the *MGC WebCommander User's Guide*.
- *Click&View* - participants can change the layout from their endpoint by entering the appropriate DTMF codes.

Personal Layout is disabled if Same Layout was selected for the conference.

To modify the Personal Layout for a participant using MGC Manager:

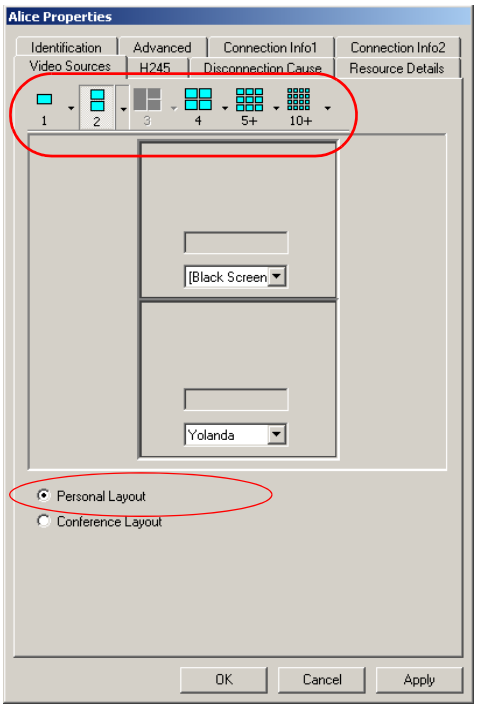
1. Right-click the icon of the connected participant you want to modify and then click **Properties**.



   The *Participant Properties* dialog box opens.

2. Click the **Video Sources** tab.
   The *Participant Properties - Video Sources* dialog box opens.

3. Select the **Personal Layout** option.



4. Click the arrow next to the number of squares/panes to be displayed on the participant's screen.
   The available video layouts for the selected view are displayed.
5. Click the desired layout.

The Video Layout pane is updated in the *Participant Properties - Video Sources* dialog box.

You may video force participants to the video layout window using the standard method as described in "Video Forcing at the Participant Level" on page 6-40.

6. Click **Apply** or **OK** and close the dialog box.
   The new layout is displayed on the participant's endpoint. However, the layout selected for the conference remains unchanged, and is viewed by all conference participants in Conference Layout view.
7. If required, repeat this procedure to modify Personal Layouts for other participants.

- Quad Views layouts are available only when the conference is defined as *Continuous Presence - Quad Views*.
- The Visual Effects selected for the conference apply to personal layout at the time of change and if Visual Effects are modified for the conference they are not applied to the Personal Layout.

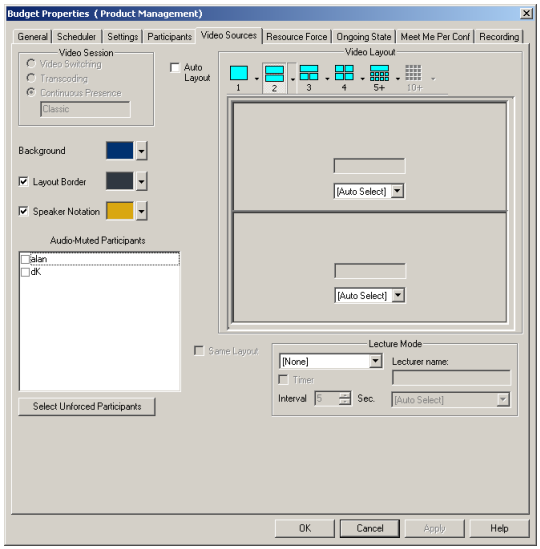
Changing the Video Layout for the Conference

During Continuous Presence conferences, you can change the video layout that was set for the conference.

To change the video layout during a Continuous Presence conference:

1. In the *Browser* pane, expand the On Going Conference list.
2. Right-click the *On Going Conference* icon, and then click **Properties**.
   The *Conference Properties* dialog box opens.

3. Click the **Video Sources** tab.
   The *Conference Properties - Video Sources* dialog box opens.



4. To select another video layout, click the arrow next to the numbered *Video Layout* icon indicating the required number of windows and click the desired video layout.
   A pop-up menu appears, displaying the available video layouts for the selected number of windows.

   Alternatively, click the Auto Layout checkbox to let the system automatically select the video layout according to the number of participants.

5. Click **Apply** to save these changes and modify additional properties or click **OK** to confirm and exit the *Conference Properties* dialog box.
   The video layout is updated for all participants/endpoints. For more details, see *"Auto Layout" on page 4-58*.

Modifying Video Layouts in Lecture Mode Settings

During Continuous Presence conferences, you can select the *Lecture Mode*, *Lecture Show*, or *Presentation Mode* settings, change their properties, or deselect them. For a detailed description, see *Chapter 10, "Lecture and Presentation Options"*.

Video Forcing

The operator can select which participant will appear in each of the video layout windows or in full screen.

Video forcing can be applied at the conference level or at the participant level. Video forcing at the conference level applies to all the conference participants while video forcing at the participant level applies only to the participant whose video layout is being modified.

Video Forcing Guidelines

- A participant cannot appear in two or more windows at the same time. When attempting to select a participant who was already selected in another window, the system clears the participant from the first window and assigns the participant to the second window.
- Video forcing performed at the participant level overrides the conference forcing.
- A participant cannot view him/herself in a layout window, unless the Same Layout option is checked.
- A participant should be assigned to the same type of layout window for the conference layout as that in the participant level. This is especially important when the video layout is set to mixed size windows, such as 1+4, 1+5, 1+7, and 1+8.
- When changing the Video Layout at the conference level, the video forcing settings are cancelled, and video switching is audio-activated.

Video Forcing at the Conference Level

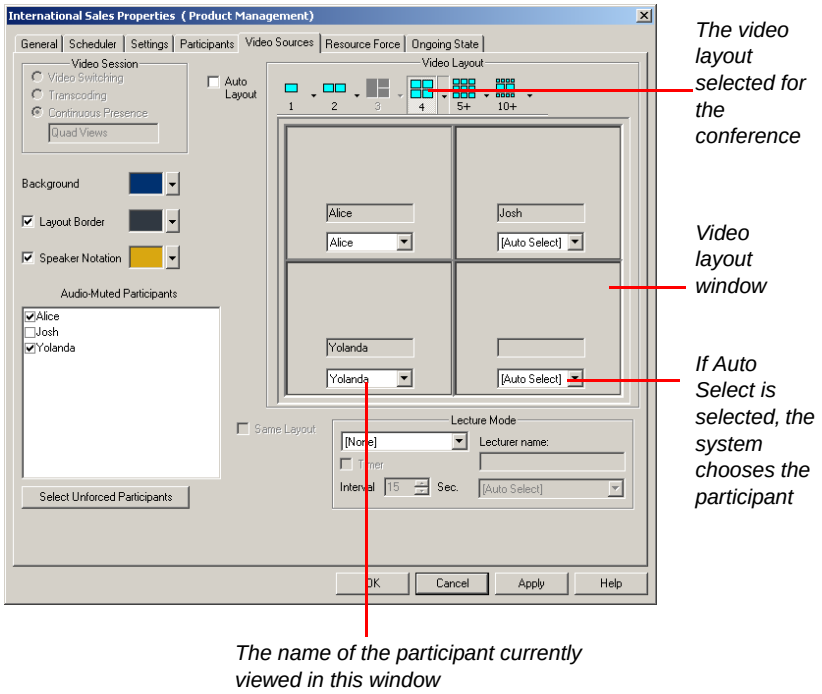
There are two methods to perform video forcing at the conference level:

- In the *Conference Properties - Video Sources* dialog box
- From the *Conference* right-click menu

To define Video Forcing in the Conference Properties:

1. Right-click the *On Going Conference* icon, and then click **Properties**. The *Conference Properties* dialog box opens.

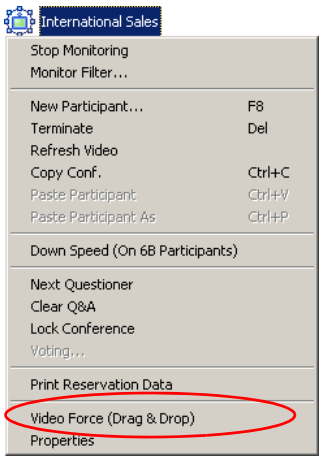
2. Click the **Video Sources** tab.
   The *Conference Properties - Video Sources* dialog box opens.



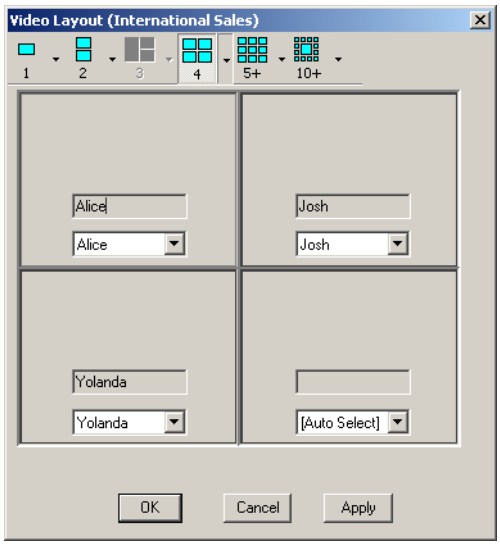
3. In the *Video Layout* pane, in the window to which you want to force a participant, select the participants name from the list.
   The participant selected for a certain video window is viewed in this window until further changes take place.
4. Repeat the previous step to force participants to other windows.
   Windows that are not assigned any participant display the current speaker and last speakers. Selecting the **Black Screen** option displays a dark grey window instead of a participant.
5. To cancel the video forcing for a window, select **Auto Select** from the participants list. In such a case, the switching between participants is audio activated.

To Video Force interactively:

1. Right-click the *On Going Conference* icon, and then click **Video Force (Drag & Drop)**.



The *Video Layout* window opens, showing the currently selected layout.

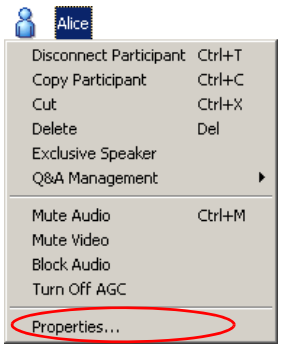


2. In the *Browser* pane, drag and drop the participant icon from the On Going Conference to the appropriate video layout window in the *Video Layout* window.
3. The participant name appears in the field at the bottom of the video layout windows. You can also video force participants to the video windows by selecting the participants name from the window's list.
4. Click **Apply** to update the conference video layout and continue with forcing to other windows, or click **OK** to apply the changes and exit this dialog box.

Video Forcing at the Participant Level

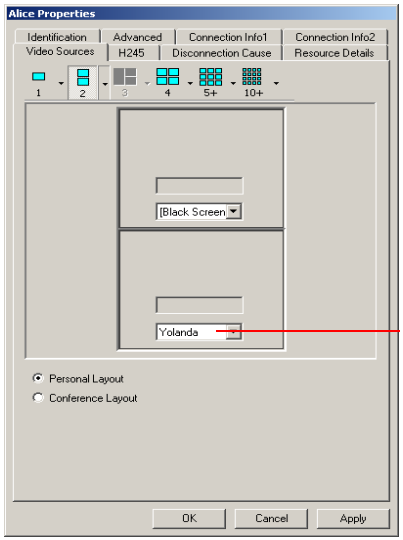
For each conference participant you can select the participants to be viewed in each of the video layout windows assigned to them.

1. Right-click the icon of the participant whose video layout you want to force, and then click **Properties**.



   The *Participant Properties* dialog box opens.
2. Click the **Video Sources** tab.

The *Participant Properties - Video Sources* dialog box opens.



Name of the participant currently forced to this window

3. In the *Video Layout* pane, select from the *Participant* list the name of the participant to be viewed in the selected window.
   The participant selected for a certain video window is constantly viewed in the window until further changes take place.
4. Repeat the previous step to select the participants to be viewed in the other windows. Windows that were not assigned any participant will display the current speaker and previous speakers, according to the conference settings.
5. To cancel the video forcing in a desired window, click **Auto select** from the *Participant* list.
6. Click **OK** to apply the changes and exit this dialog box,

Video Forcing at the Participant level overrides Video Forcing at the Conference level.

Conference Level Operations

Adding New Participants to a Conference

Occasionally you may be required to add a participant after a conference has begun. To do this, you can use one of the following methods

- Define a new participant:
  - — using the conference right-click menu
  - — using the conference toolbar
  - — using the Conference Properties dialog box
- Add a defined participant from the Participant Database or from a Participant Template file.
- Copy a participant from another conference or a conference template.
- Inviting an H.323 Video participant. This option is available from the inviter endpoint using the appropriate DTMF code. For more details on *Video Invite,* see the *MGC Manager User's Guide, Volume II, Chapter 1.*

For detailed information on using databases and templates, see the *MGC Manager User's Guide Volume II, Chapters 6 and 7* respectively.

For detailed information on defining participants, see *Chapter 4, "Defining Participant Properties"*.

When defining a participant, during an On Going Conference, only the participant properties relevant to the conference to which the participant is added are enabled. For example when defining a participant during an On Going Audio Only conference, only audio participants can be defined.

To define a new participant using the conference right-click menu:

1. Expand the *On Going Conferences* list, right-click the icon of the conference to which to add the participant, and then click **New Participant**. Alternatively, use the shortcut key (default key is **<F8>**).

   The *Participant Properties* dialog box opens.

2. Set up the required properties in the *Identification* and *Advanced* tabs of the *Participants Properties* dialog box.

3. Click **OK**.
   The new participant is added to the conference. The participant's name is listed in the *Monitor* and *Status* panes of the main window.

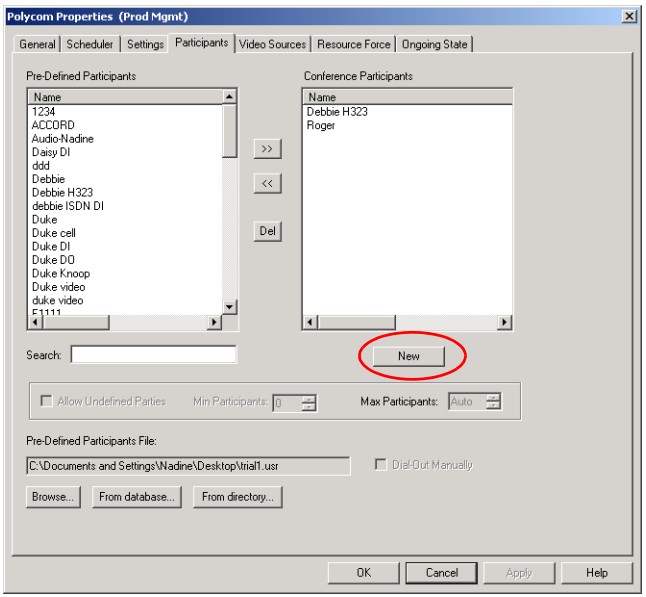
To define a new participant from the conference toolbar:

1. Expand the *On Going Conferences* list, click the icon of the conference to which to add the participant, and then click the **New Participant** button on the Conference toolbar.
   The *Participant Properties* dialog box opens.

2. Repeat the steps 2 and 3 as in the previous procedure.

To define a new participant from the Conference Properties dialog box:

1. Expand the *On Going Conferences* list, right-click the icon of the conference to which to add the participant, and then click **Properties**.
   The *Conference Properties* dialog box opens.
2. Click the **Participants** tab.
   The *Conference Properties - Participants* dialog box opens.



3. Click the **New** button.
   The *Participant Properties* dialog box opens.
4. Set up the required properties in the *Identification* and *Advanced* tabs of the *Participants Properties* dialog box.
5. Click **OK.**
   The new participant is listed in the *Conference Participants* list.
6. Click **OK** to complete the conference editing and return to the MGC Manager main window.
   The participant's name appears in the *Monitor* and *Status* panes of the main window.

To add a Participant Template to the conference:

You can add a participant template to the conference from the Participant database or from a Participant Template file.

1. In the On Going Conferences list, right-click the conference icon, and then click **Properties**.

   The *Conference Properties* dialog box opens.

2. Click the **Participants** tab.
   The *Conference Properties - Participants* dialog box opens. The participants list is displayed according to the selected Reservation template. However, you can change the Database Group or the Participant Template file to display additional participant templates.

3. To add a participant from another Group in the database:

   a. Click the **From database** button.
   The *Open Parties in database* dialog box opens.

   b. Select the desired Group from the *Group* list and click **OK**.
   The list of Participant templates in displayed in the *Pre-defined Participants* box in the *Conference Properties – Participants* dialog box.

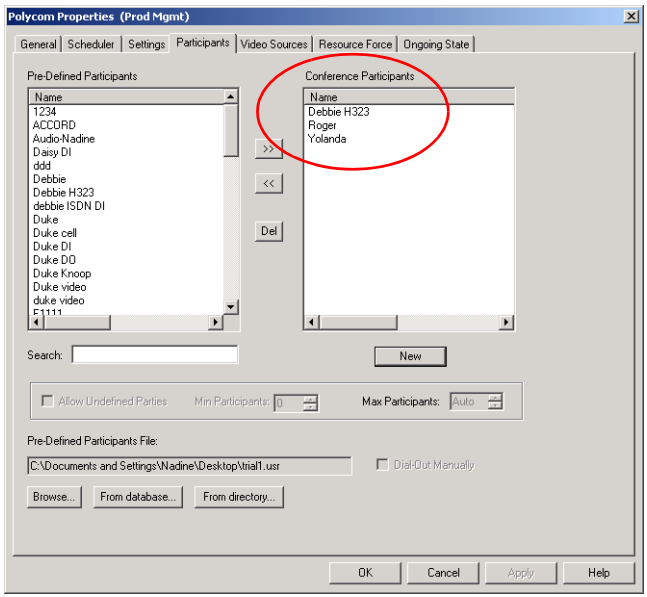
4. To add a participant from a Participant Template file,

   a. Click the **Browser** button.
   The *Open* dialog box opens.

   b. Select the appropriate Participant Template file from the browser list, and click **Open**.
   The list of Participant templates is displayed in the *Pre-Defined Participants* box in the *Conference Properties - Participants* dialog box.

5. In the *Pre-defined Participants* list, select the participant to add to the conference, and then click the *Move* (>>) button.

   The participant is added to the *Conference Participants* list.

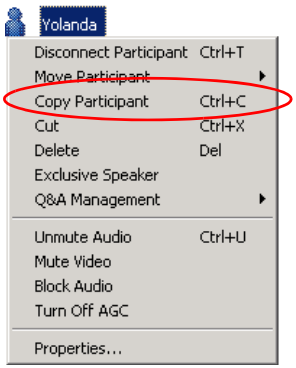


6. Click **OK** to complete the selection.

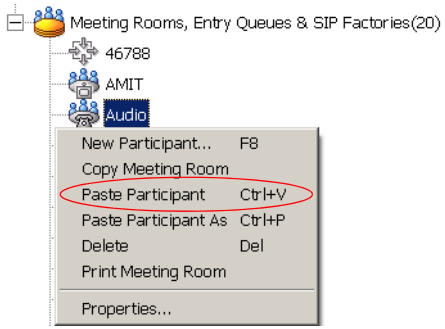
To copy the participant properties from an On Going Conference or Reservation:

1. In the *Browser* pane, expand the *Reservations* or the *On Going Conferences* list, and then expand the *On Going Conference* icon to list its participants.

2. Right-click the icon of the participant to copy, and then click **Copy Participant**, or use the appropriate shortcut key (the default key is <**Ctrl**>+<**C**>).



3. Right-click the conference icon to which to copy the participant, and then click **Paste Participant,** or use the appropriate shortcut key (the default key is <**Ctrl**>+<**V**>).



The participant's details are copied to the selected conference under the same name.

Alternatively, to paste the participant while changing the participant's name and other parameters:

a. Click **Paste Participant As.**
The *Participant - Properties* dialog box opens.

b. Change the participant's parameters, and then click **OK.**
The participant is added to the conference with the new parameters.

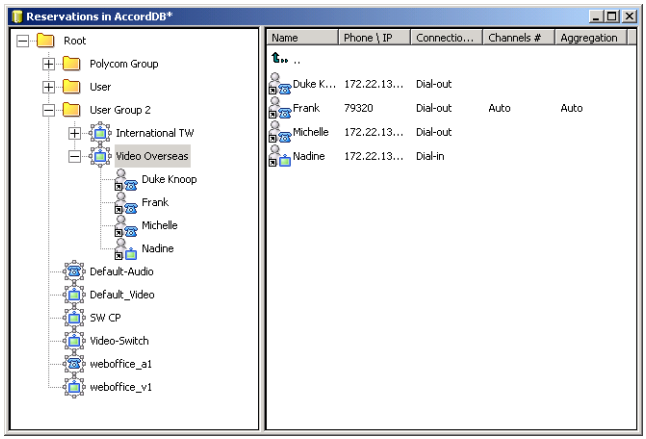
When defining a participant, during an On Going Conference, only the participant properties relevant to the conference to which the participant is added are enabled. For example when defining a participant during an On Going Audio Only conference, only audio participants can be defined.

For detailed information on defining participants, see *"Defining Participant Properties" on page 4-85*.

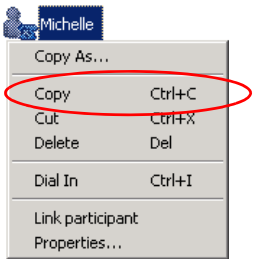
To copy the participant properties from a Database Reservation template:

You can copy a participant from a participant template to a conference.

1. Open the *Reservation in Database* window, as described in *Chapter 3, "Reservation Templates" on page 3-25.*
2. Expand the *Groups* tree until you locate the Reservation template containing the participant that you wish to copy.
3. Expand the Reservation template icon to list its participants.



4. Right-click the icon of the participant to copy, and then click **Copy** or use the appropriate shortcut key (the default key is <**Ctrl**>+<**C**>).



The participant details are copied to the clipboard.

Alternatively, to copy the participant under a new name:

a. Click **Copy As**.
The *Participant - Properties* dialog box opens.

b. Change the participant's name, and then click **OK**.
The participant's details will be copied to the clipboard under the new name.

5. In the *On Going Conferences* list, right-click the conference icon to which you wish to copy the participant, and then click **Paste.**
The participant's details will be copied to the new conference under the same name.

Alternatively, to copy the participant's details to the new conference under a new name:

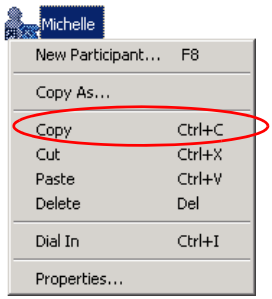
a. Click **Paste Participant As**
The *Participant - Properties* dialog box opens.

b. Type the name that you wish to save the participant as, or modify any of the participant's properties, such as the *User Defined* fields.

c. Click **OK**.
The participant's details will be copied to the On Going Conference, under the new name.

To copy the participant Properties from a Database Participant template:

1. Open the *Participants in Database* window as described in Chapter 3, “Using Default Templates to Start a Conference” on page 3-25.
2. Expand the *Groups* tree until you locate the participant you want to copy.
3. Right-click the icon of the participant to copy, and then click **Copy** or use the appropriate shortcut key (the default key is **<Ctrl>+<C>**).



The participant is copied to the clipboard.

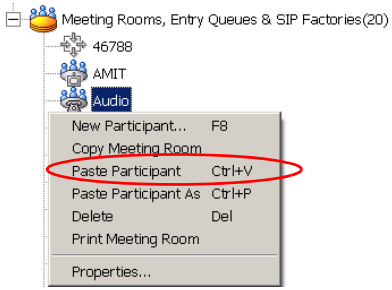
Alternatively, to copy the participant under a new name:

a. Click **Copy As**.
The *Participant - Properties* dialog box opens.

b. Type a new name for the participant, or modify any of the participant’s properties, such as the *User Defined* fields.

c. Click **OK**.
The participant is copied to the clipboard under the new name.

4. In the On Going Conferences list, right-click the conference icon to which to copy the participant and then click **Paste Participant**.



The participant's details will be copied to the new conference under the same name.

Alternatively, to copy the participant's details to the new conference under a new name:

a. Click **Paste Participant As**
The *Participant - Properties* dialog box opens.

b. Type the participant name, or modify any of the participant's properties, such as the *User Defined* fields.

c. Click **OK**.
The participant's details will be copied to the new conference under the new name, or with the modified properties.

To move the participant's details using the drag and drop method:

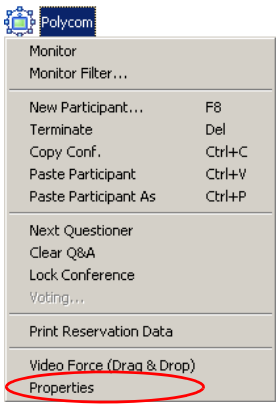
1. In the MGC Manager, expand the *On Going Conferences* or *Reservations* list until you locate the source conference from which to copy the participant.
   - In the *Reservations* database, expand the *Groups* tree until you locate the source conference from which to copy the participant.
   - In the *Participants* database, expand the *Groups* tree until you locate the participant to copy.
2. In the MGC Manager, expand the *On Going Conferences* list until you locate the destination conference to which to copy the participant.
3. Click the icon of the participant that you want to copy and then drag the participant icon to the icon of the destination conference.
The participant is copied to the new location.

Muting Audio for a Conference

The MGC Manager enables you to mute several participants at the same time, using the *Conference Properties – Video Sources* dialog box. This option is advantageous when you need to mute many participants during a conference. In this dialog box, the system lists all the participants currently connected to the conference. You can manually select the participants to be muted by selecting the check boxes. Alternatively, you can mute all the participants that are not video forced (selected for display in one of the Video Layout window by selecting the **Check not Forced Parties** button. For example, in a lecture conference, the lecturer can be forced in one window, while all the remaining participants (that are not video forced) are muted.

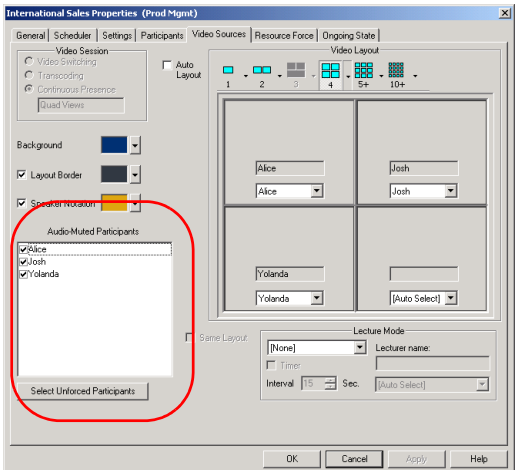
To mute audio at the conference level:

1. In the *Browser* pane, *Monitor* pane or the *Status* pane, right-click the *On Going Conference* icon, and then click **Properties**.



The *Conference Properties* dialog box opens.

2. Click the **Video Sources** tab.
   The *Conference Properties - Video Sources* dialog box opens.



   The *Audio Muted Participant* box lists all the participants currently connected to the conference. A clear check box indicates that the participant's audio channel is in the normal mode (unmuted), while a checked box indicates that the participant's audio channel is muted.

3. Select the check boxes of the participants to be muted.
   Alternatively, to mute all the participants except those who are video forced (that is, those who are displayed in one of the video layout windows) click the **Select Unforced Participants** button. All the participants that are not video forced are checked. You can now unmute and mute an individual participant in the *Audio Muted Participants* box.

4. Click **OK**.

   The participants' audio icon in the Audio column in the *Monitor* and *Status* panes now indicates that the audio channel was muted by the operator.

Locking/Unlocking a Conference

The operator or chairperson can lock or unlock an On Going Conference to dial-in participants. In addition, you can lock a conference during setup (whether you are defining a new conference in the Reservation template or in the Conference Properties dialog box) and, if required, unlock it while it is ongoing. The purpose of conference locking is to:

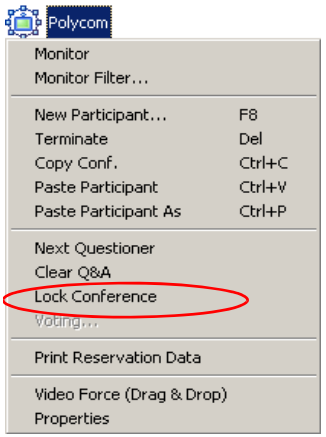
- Limit the number of dial-in participants connecting to the conference
- Prevent additional participants from connecting to the conference once all the required participants are connected
- Save resources

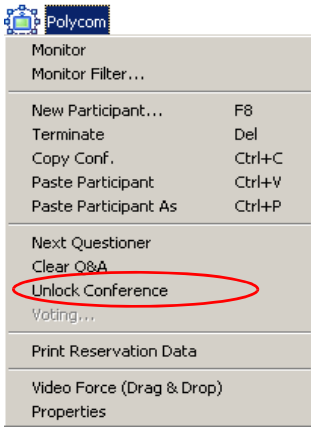
You can lock and unlock the conference from the right-click menu, from the toolbar or from the *Conference - Properties* dialog box.

Alternatively, the chairpersons can lock or unlock a conference from their endpoint using the appropriate DTMF code (the default codes are: Conference lock and unlock ***70** and **#70**).

To lock a conference from the Conference right-click menu:

1. Expand the *On Going Conferences* list.
2. Right-click the icon of the conference to lock, and then click **Lock Conference** or **Unlock Conference** according to the current conference *Lock* status.

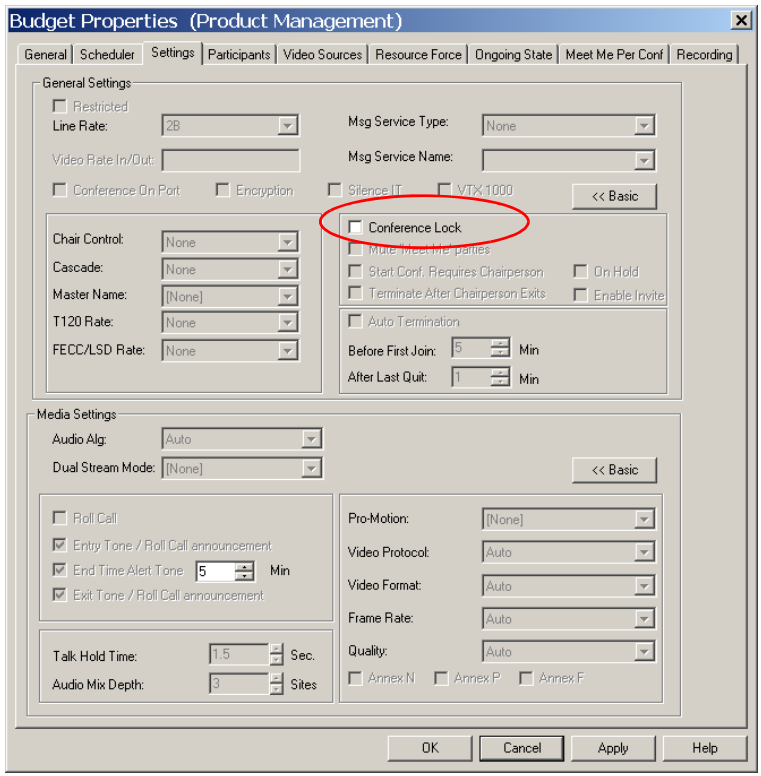




The *Locked Conference* icon that appears in the *Status* column in the *Monitor* and the *Status* panes indicates the conference is now locked. When unlocking the conference, this icon is removed from these columns.

To lock and unlock a conference from the Conference Properties dialog box:

1. Expand the *On Going Conferences* list, right-click the conference icon and then click **Properties**.
   The *Conference Properties* dialog box opens.
2. Click the **Settings** tab.
   The *Conference Properties - Settings* dialog box opens.
3. Select the **Conference Lock** check box to lock the conference or clear it to unlock the conference



The *Locked Conference* icon appears in the *Status* column in the *Monitor* and *Status* panes when the conference is locked and is removed when the conference is unlocked.

To lock or unlock a conference using the Conference toolbar:

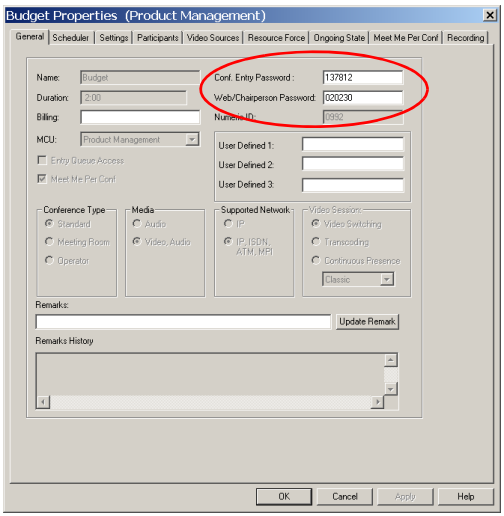
1. Expand the *On Going Conferences* list, and then click the icon of the conference to lock or unlock.
2. On the toolbar, click the **Lock Conference** button to lock the conference or the **Unlock Conference** button to unlock the conference.
   The *Unlocked Conference* icon appears in the *Status* column in the *Monitor* and *Status* panes when the conference is locked and is removed when the conference is unlocked.

Changing the Conference and Chairperson Password

During an On Going Conference, the conference and/or chairperson password can be modified by the chairperson or participant (depending on the permission configuration) using DTMF codes or by the operator via the MGC Manager. For DTMF operations, *see "Using DTMF Codes During a Conference" on page 6-88.*

To modify the conference or chairperson password:

1. Right-click the On Going Conference icon, and then click **Properties**. The *Conference Properties* dialog box opens.
2. Click the **General** tab.
   The *Conference Properties - General* dialog box opens.



Note: To be able to change the Conference Password, an IVR Service must be assigned to the conference.

3. Enter a new conference and/or chairperson password, and click **OK**. From this point on, dial-in participants must enter the new password or they will not be able to connect to the conference.

Changing the Conference Duration

At times, operators may find it necessary to manually extend the duration of a conference or terminate a conference before its scheduled completion time.

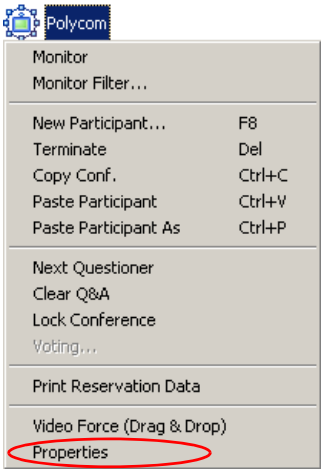
For a description of how to automatically extend or terminate a conference, see the *MGC Manager User's Guide, Volume. II, Chapter 1, "Extending the Conference Duration"*.

Extending a Conference Manually

You can manually extend the conference duration even after the conference has started.

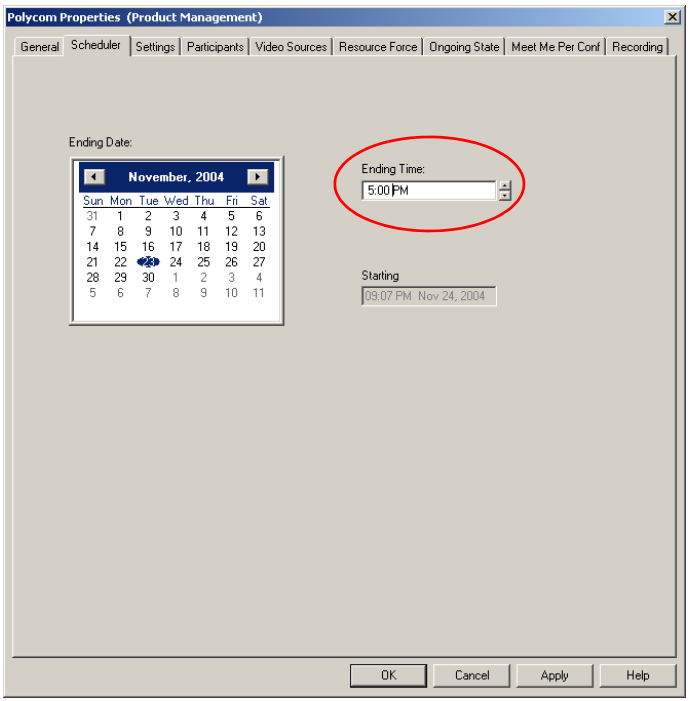
To extend an On Going Conference:

1. In the *Browser*, *Monitor* or *Status* panes, right-click the icon of the conference whose duration you want to extend, and then click **Properties**.



The *Conference Properties* dialog box opens.

2. Click the **Scheduler** tab, and then modify the conference *Ending Time*.



3. Click **OK** to apply the settings.
   The *Conference Properties* dialog box closes. The conference's duration is adjusted to extend until the *Ending Time* you defined in the Scheduler.

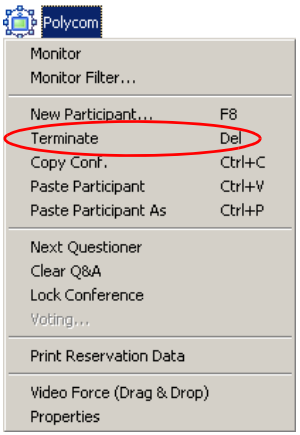
The time format is derived from the Operating System time format defined in the Regional Settings.

Terminating a Conference Manually

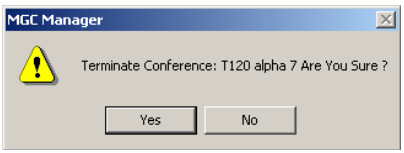
You can manually end the conference before its scheduled end time. Usually, this option is used when all the participants disconnect from the conference, or if the meeting organizer has requested it.

To terminate a conference manually:

1. In the *Browser*, *Monitor* or *Status* panes, expand the *On Going Conferences* list, right-click the icon of the conference to end, and then click **Terminate.**



Alternatively, use the shortcut key (The default key is **<Del>** or click the **Terminate** button on the *Conference* toolbar.
A dialog box opens prompting you to confirm the action.



2. Click **Yes**.
The conference is terminated. The conference name and its icon are removed from the *On Going Conferences* list.

Enabling the End of Conference Reminder

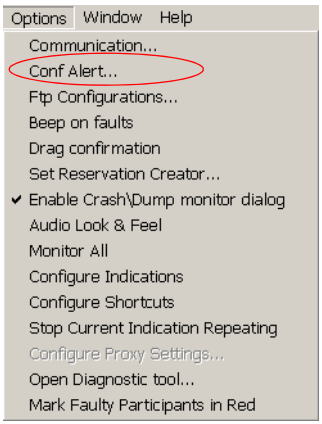
The *End of Conference Reminder* indication appears in the MGC Manager before the end of the conference, reminding you to extend the conference if necessary. The indication remains on display until the conference ends. This indication is displayed at a pre-defined time before the end of the conference.

In addition to the display in the MGC Manager application to let the operator know that the conference is about to end, audio and visual indications can be played to the conference participants on their endpoints. For more details, see Chapter 5, "Audio and Visual Indications" on page 5-31.

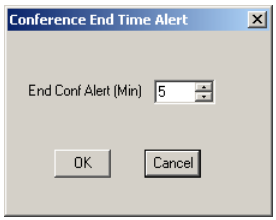
The timing of the end of conference reminder is defined in the **Conf Alert** function in the *Options* menu.

To enable the End of Conference reminder:

1. On the *Options* menu, click **Conf Alert**.



The *Conference End Time Alert* dialog box opens.



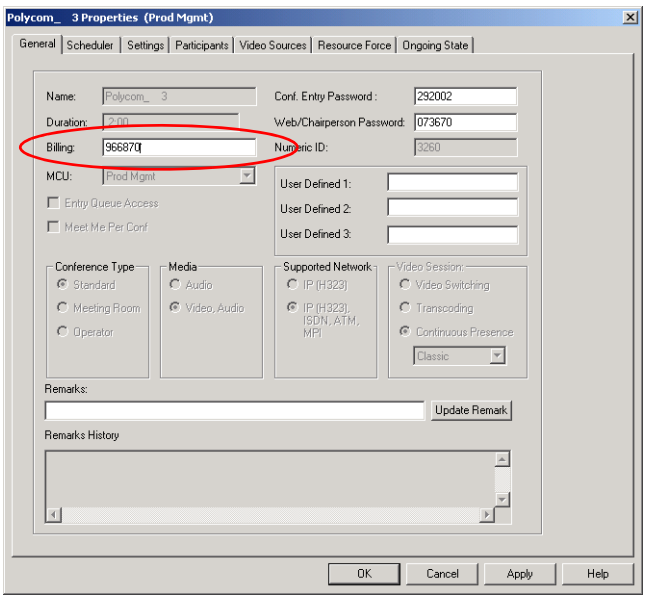
2. Set the time period (in minutes) before the end of the conference to display the *End of Conference Reminder* icon. For example, if you enter 5, the *End of Conference Reminder* icon will be displayed five minutes before the end of the conference. Entering 0 disables the appearance of the icon.
3. Click **OK** to apply the settings.
   The system will display the *End of Conference Reminder* icon *x* minutes (where *x* is the number of minutes entered in this dialog box) before the end of the conference.

Changing the Conference Billing Code

During an On Going Conference, the billing code can be modified by the chairperson or the operator via the MGC Manager.

To modify the Billing code:

1. Right-click the *On Going Conference* icon, and then click **Properties**.
   The *Conference Properties* dialog box opens.
2. Click the **General** tab.
   The *Conference Properties - General* dialog box opens.



3. Enter a new *Billing* code, and click **OK**.
   From this point on, the modified Billing code is applicable to this conference.

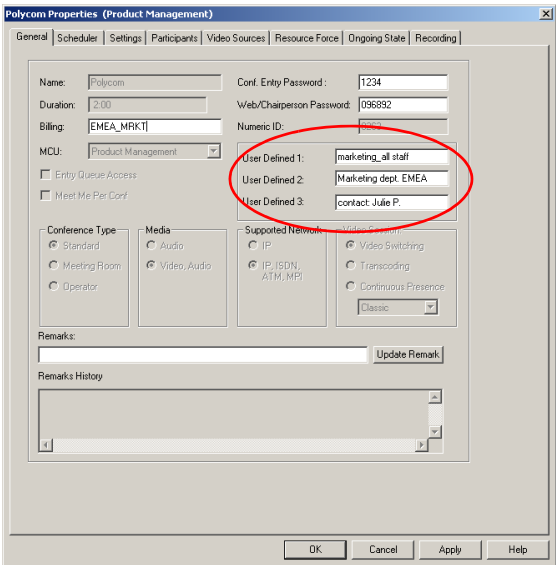
Changing the Conference User Defined Parameters

During an On Going Conference, the *User Defined* fields can be modified by the chairperson or the operator via the MGC Manager. The *User Defined 1, 2* and *3* fields enable you to enter general information about the conference, such as the company name, the contact person name, the contact person's E-mail or telephone number, or any required information.

The User Defined fields are displayed only if the *Show User Defined* fields option in the Conference Properties is selected in the Database Manager User Defined Defaults. The titles of the User Defined fields can also be modified in the Database Manager -> Defaults -> User Defined Defaults and then loaded to the MGC Manager application.

To modify the Conference User Defined fields:

1. Right-click the On Going Conference icon, and then click **Properties**.
   The *Conference Properties - General* dialog box opens.

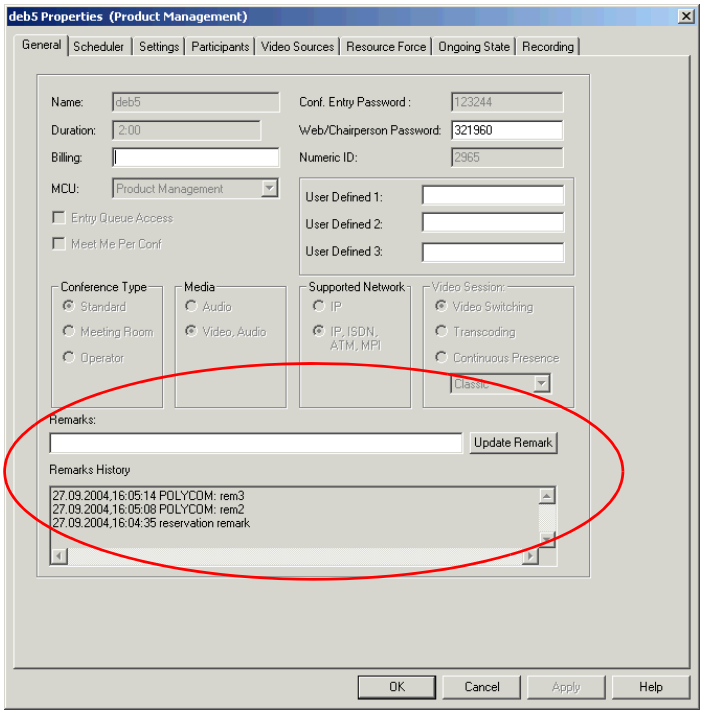


2. Modify the information in the *User Defined* fields, and then click **OK**.

Adding Remarks During an On Going Conference

Operators can add remarks during an On Going Conference in the *Conference Properties - General* dialog box. Remarks entered previously by the operator or other operators can be read during the On Going conference. Remarks can also be added from the Web via the WebCommander application. The remarks are added to the CDR file, for retrieval during the billing stage.

Remarks are added in the *On Going Conference Properties - General* dialog box, in the *Remarks* field. Previous remarks written for the conference are displayed in the *Remarks History* box, in the ascending order (latest entry at top of the list).



To enter a remark during an On Going Conference.

1. Expand the *On Going Conference* list, right-click the On Going Conference definition you want to update, and click **Properties**.
   The O*n Going Conference Properties* dialog box opens.
2. Click the **General** tab.
   The O*n Going Conference Properties - General dialog box opens.*
3. Enter text (up to 300 characters) in the *Remarks* box.
4. To add multiple remarks, click **Update Remark** (which moves the previous remark to the *Remarks History* box and writes it to the CDR file) and then repeat step 3.
5. Click **OK**.
   The dialog box closes and the new remark is written to the CDR file and moved to the *Remarks History* box.

Broadcasting Annex D Still Video Image (Slide)

An endpoint with Annex D capabilities can send an Annex D still video image (slide) to the MCU to be broadcast to all other participants in a Transcoding or a Continuous Presence video conference.

When an endpoint sends the Annex D image, the following operations are performed by the MCU:

- The MCU automatically switches the video layout to Full Screen (1x1)
- The MCU video forces the sender to be seen by all participants when an MCV (Multipoint Command Visualization) signal is sent from the endpoint
- The MCU transmits the Annex D image in full 4CIF quality to all the connected conference participants

An Annex D slide can be transmitted by an endpoint using one of the following methods:

- The endpoint first requests the chair token and becomes the chairperson. Sometimes during the conference, while acting as the chairperson, the endpoint may send the Annex D still image.
- The endpoint sends an MCV signal to the MCU requesting the Chairperson. If the request is accepted by the MCU, the endpoint becomes the chairperson and transmits the still image. To release the

Chair token and restore the conference to its previous state the Cancel-MCV command is sent by the endpoint. This procedure conforms to the H.320 standard.

- The endpoint sends an Annex D image without an MCV signal, or a request for the chair token prior to the image transmission. The MCU recognizes the incoming Annex D image, processes it and broadcasts it to all other participants. In such a case, only the participants who can view the sender can see the Annex D still image.

The Annex D image is sent to all endpoints. If an endpoint has two screens, the still video image is viewed on one screen while the live video will be seen on the second screen, without being interrupted. If the endpoint has only one screen, the live video is interrupted for a few seconds to display the still image. The image is stored in the endpoint's memory and can be viewed at the discretion of the individual participants. At the end of the transmission, the conference video is restored.

The image handling process takes a number of seconds (a long time, relatively) since a full 4CIF image is created while the VCP video card receives four instances of the same still image and transmits them. The estimated processing time for an Annex D image is 2 seconds.

When the request to send the Annex D image is received, the Video MCU can be in one of the following states:

Table 6-1: Annex D Image Processing and Video MCU State

Video MCU state when receiving Annex D image	Video MCU behavior
The Annex D sender is video muted.	The chair request /image transmission is denied.
Some of the other endpoints are video muted.	The request is accepted. These participants are able to see the image, but are not seen by other participants.
The Lecture Mode is ON and the sender of the Annex D image is not the lecturer.	The chair request /image transmission is denied.
The Lecture Mode is ON and the sender of the Annex D is the lecturer.	The request is accepted.

Table 6-1: Annex D Image Processing and Video MCU State (Continued)

Video MCU state when receiving Annex D image	Video MCU behavior
The Video Force feature is enabled, and a participant other than the sender is selected in the full screen (1x1).	The request for Annex D overrides the forced video therefore the Annex D processing continues.
The operator selects (forces) an endpoint other than the sender, in the full screen window at the conference level.	The chair request /image transmission is denied. (According to H.320 recommendation.)

The following operations can be performed during the transmission of Annex D images:

- Speaker changes, in order to return to the proper image upon the completion of the Annex D transmission
- Video mute requests from participants
- Add/delete participants by the operator

The following requests or commands will be ignored during an Annex D broadcast:

- Video forcing by the operator, at the conference level and at the participant level
- Video forcing by the chairperson, at the conference level and at the participant level
- Video forcing by an endpoint at the conference level
- Request to mute any endpoint (including the slide sender)
- Request to start or end the Lecture mode
- Changing the Lecture mode parameters
- Changing the Video Layout parameters

To run this feature, video cards of version 1.4x and higher, are recommended. Sending an Annex D image using video cards of version 1.2x and below (1 MB cards), will cause the VCP of the slide sender to stop encoding the video while receiving the slide. During this time, the image of the sender freezes at the remote sites.

Table 6-2 lists the transmission standards supported by Annex D.

Table 6-2: Annex D Format Support

Standard/ Conference Type	H.320/H.261	H.320/H.263	H.323/H.261	H.323/H.263
Video Switching	Supported	Supported	Supported	Supported
Continuous Presence	Supported	Supported	Supported	Supported
Software Continuous Presence	N/A	N/A	Not supported	Not supported

Printing Conference Data

Once a reservation is made, the system allocates the appropriate resources to the conference. You can print this data, for example the conference name, ID, start time, duration, line rate, or the participant parameters - to a printer, file or clipboard (to be used by other applications).

The printed data of reservations can be sent to the conference participants in advance, letting them know the actual conference settings and the dial-in numbers they will use when connecting to the conference.

The printed data can be used to keep record of all On Going Conferences and planned activities for the MCU or operators.

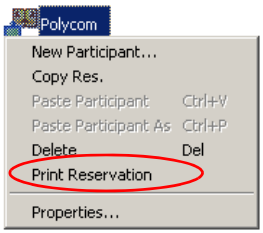
You can print data for a single On Going Conference or Reservation, or for all the On Going Conferences or Reservations.

Before printing conference information to a printer, make sure that a default printer is defined in your workstation.

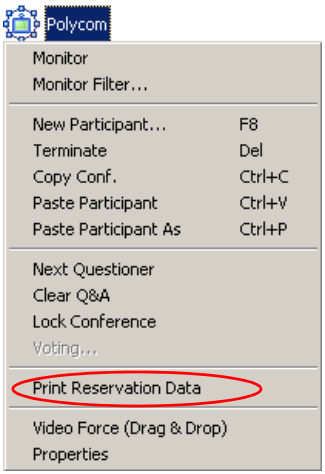
To print details of a single conference:

1. Expand the *On Going Conferences* list or the *Reservations* list.
2. Print conference details using one of the following options:

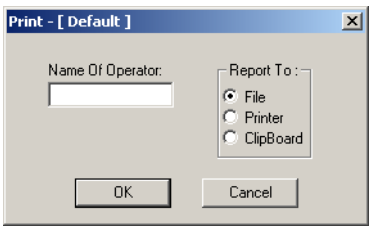
— In the *Reservations* list, right-click the reservation whose data you want to print, and then click **Print Reservation**.



— In the *On Going Conferences* list, right-click the conference whose data you want to print, and then click **Print Reservation Data**.

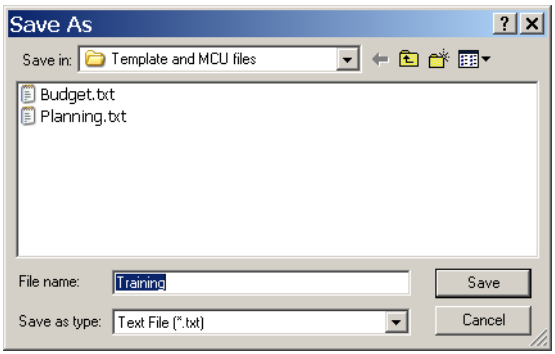


The *Print* dialog box opens.



3. In the *Name Of Operator* field, enter the name of the operator who initiated the report.

4. In the *Report To* box, select the report destination:
   - **File** - to print the conference data to a text file
   - **Printer** - to print the conference data to a printer
   - **Clipboard** - to copy the conference data to the clipboard for use by other applications
5. Click **OK**.
   - If **File** is selected, the *Save As* dialog box opens.



   Select the destination folder. The system assigns the conference name as the default file name. However, you can define another file name. Click **Save**.
   - If **Printer** is selected, the *Print* dialog box opens. Select the required printer and then click **OK**. The conference data is printed using the printer's current settings.
   - If **Clipboard** is selected, the conference data is copied to the clipboard, from where it can be pasted in other text processing applications.

The following is a sample of Reservation or Conference information. The first section lists the Reservation general parameters and the second section lists the Participants parameters.

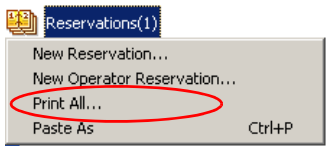
```
Operator Data
-------------
OperatorName - Duke

Reservation Data
----------------
Reservation Name - Polycom
Id - 1122
Conf. Entry Password -
Web/Chairperson Password -
Start Time - Feb 10, 2004 07:07:00 PM
Duration - 02:00:00
Line Rate - 2B
Restrict - No
Audio Alg - Auto
Video Protocol - Auto
Video Format - Auto
Frame Rate - Auto
T120 Rate - None
Attended - None
AV Message Name -
Operator Conference - No
Talk Hold Time - 1.5
Audio Mix Depth - 3
Video Layout - Single Frame
Lecture mode - Off
VideoSession - Video Switching

Cascade Mode -
Participants - Lynne
        -----
        Connection Type - Dial Out
        Interface Type - H323
        Service Name - 323
        IP - 172.22.132.183
        Signaling port - 1720
        Alias name -
        Alias Type - H323 Id
        Channel Width - 64 kbps
        Number of Channels - 2
        Bonding Mode - Auto
        Chair - No
        Voice - Data
        Node Type - Terminal
        Restrict Only - No

        Duke IP
        -------
        Connection Type - Dial Out
        Interface Type - H323
        Service Name - 323
        IP - 172.22.133.39
        Signaling port - 1720
        Alias name -
        Alias Type - H323 Id
```

Channel Width - 64 kbps
Number of Channels - 2
Bonding Mode - Auto
Chair - No
Voice - Data
Node Type - Terminal
Restrict Only - No

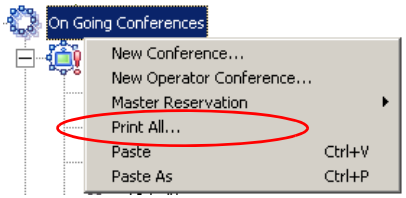
To print details of all On Going Conferences or Reservations:

1. Print details using one of the following options:

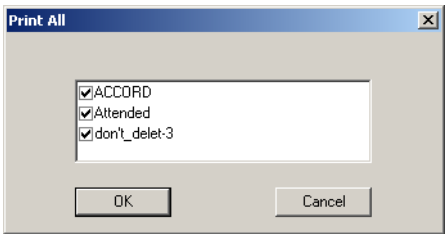
   — In the *Reservations* list, right-click the *Reservation* icon, and then click **Print All**.



   — *On Going Conferences* list, right-click the *On Going Conferences* icon, and then click **Print All**.

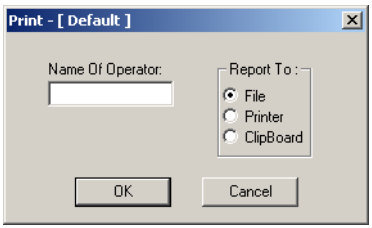


   The *Print All* dialog box opens listing the On Going Conferences or Reservations currently handled by the MCU whose data can be printed.



2. To exclude conferences from the printing session, clear the check box next to the name of the conference or reservation.

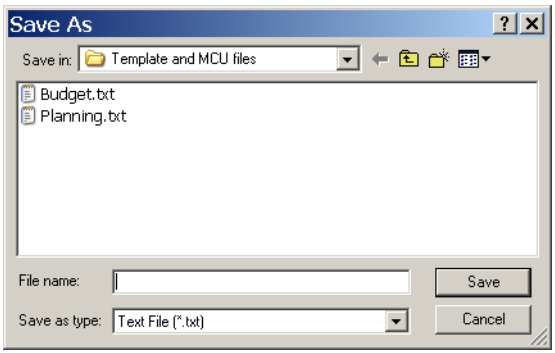
3. Click **OK**.
   The *Print* dialog box opens.



4. Enter your name as the report initiator, select the report destination, and then click **OK**.

If *File* is selected as the printing destination, the data of all the conferences are printed to the same text file.

— If **File** is selected, the *Save As* dialog box opens.



Select the destination folder. Specify the file name and then click **Save**.

— If **Printer** is selected, the *Print* dialog box opens. Select the required printer and then click **OK**. The conference data is printed using the printer's current settings.

— If **Clipboard** is selected, the conference data is copied to the clipboard, from where it can be pasted in other text processing applications.

Managing Question-and-Answer Sessions

The Question-and-Answer (Q&A) session provides a method of organizing the participants questions or comments during a lecture or a large conference.

Usually during a large conference or lecture, all participants excluding the lecturer or the main speaker, are muted by the system. A participant who wants to ask a question or comment on the subject being discussed, presses the appropriate code on the DTMF input device (the default code is *22) to enter the Q&A queue. The participants are placed in the Q&A queue in the order in which they have requested to ask a question.

You can also place participants in the Q&A queue from the MGC Manager application using the Q&A Toolbar.

Once in the Q&A queue, you can select the participant to ask the question or let the next participant in line ask the question. If the participant is muted by the MCU (in the Exclusive Speaker mode), you have to unmute the participant before you let him or her ask the question.

You can stop the questioner any time during the question or you can end the current Q&A session using the appropriate code on the DTMF input device or by selecting the appropriate function in the MGC Manager application.

You can change the position of the participants in the queue, moving a selected participant's position up or down the queue or to the first or last position in the queue.

- A Q&A session requires the use of a DTMF input device.
- The Q&A session managing options are applicable only to conferences with an assigned IVR Service (running on an Audio+ card).

Controlling Q&A Queues with the Toolbar

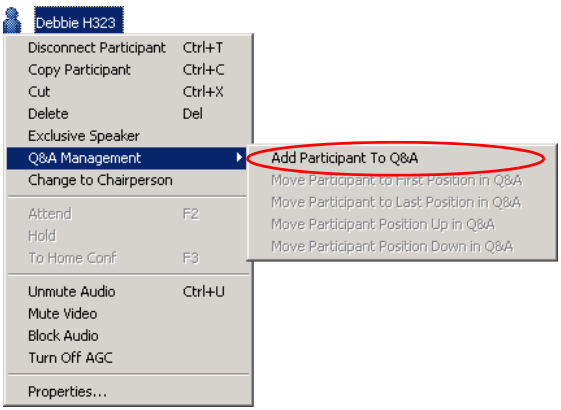
You can easily manage the Q&A queues using the dedicated toolbar. Enable this toolbar by clicking a participant icon in an On Going Conference or by clicking the icon of a participant waiting in the Q&A queue.

The Q&A toolbar is detailed in *Table 3-8 on page 3-19*.

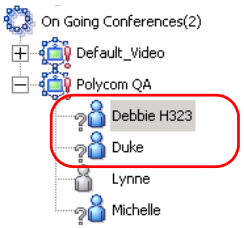
Adding Questioners to Q&A Queues

Participants can be added as questioners to the Q&A queue using one of the following options:

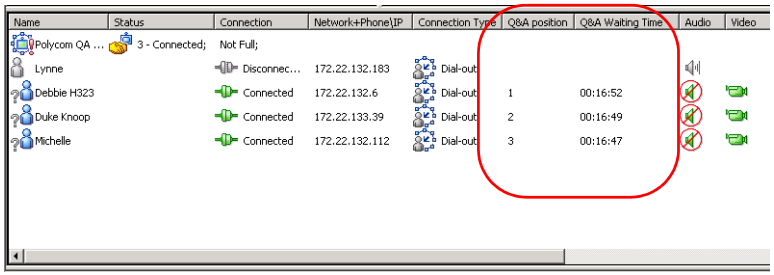
- Questioners are added to the Q&A queue once they press the appropriate DTMF code on their DTMF input device (default DTMF code is ***22**). An appropriate audio message is played to confirm the participant addition to the Q&A queue.
- Questioners can also be added the queue manually from the MGC Manager application. In the *Browser*, *Status* or *Monitor* panes, right-click the icon of the participant to add to the queue, click **Q&A Management**, and then click **Add Participant to Q&A**.



The participant icon changes, to indicate that the participant was added to the Q&A queue.



In addition, the *Monitor* pane displays information on the participant's position in the Q&A queue and how long the participant has been waiting in the queue to ask the question.



The *Q&A Position* column shows the order of the participants who have requested to ask a question in the Q&A queue.

The *Q&A Waiting Time* column displays the length of time the participant has been waiting in the Q&A queue.

In the above figure, the Q&A columns were moved to the left. By default, these columns are located on the right of the *Monitor* and *Status* panes and you must use the scrolling arrows to display them.

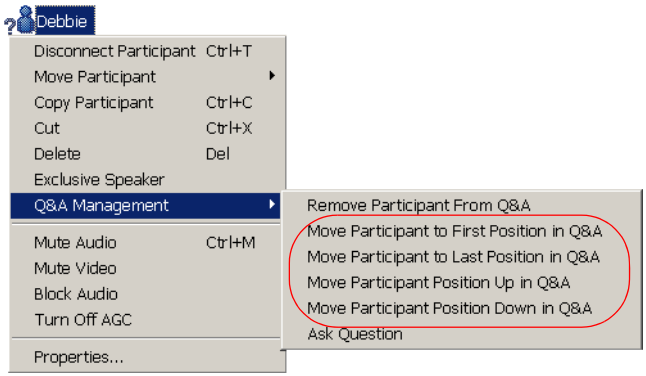
Changing a Participant's Position in the Q&A Queue

You can change the position of any participant in the Q&A queue when you want certain participants (such as participants designated as VIP) to ask questions first, and others to be moved to the end of the queue.

To change the participant's position in the Q&A queue:

- Select the participant to move by clicking the *Participant* icon, and then, on the Q&A toolbar, click:
  - — *Move Participant to First Position in Q&A* button
    or
  - — *Move Participant to Last Position in Q&A* button

- Alternatively, change the position of a participant in the Q&A queue by right-clicking the *Participant* icon, clicking **Q&A Management**, and then clicking the position to which the participant should move.



  Using the right-click menu, you can move the participant to the following positions in the Q&A queue:

  — First position
  — Last position
  — Up one position
  — Down one position

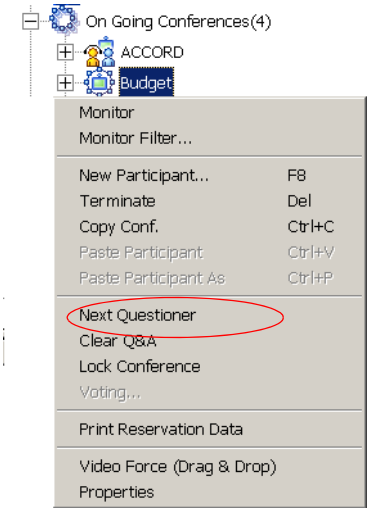
Allowing Participant Questions

Participants in the Q&A queue can ask a question after the permission is granted to them by the conference chairperson or the operator.

- The chairperson enters the appropriate code on the DTMF input device to let the first participant in the queue ask the question. The default code for this action is ***23**. An audio confirmation is played.
- The operator lets the first participant in the queue ask a question using one of the following methods:

  — Click the *Next Questioner* button on the Question-and-Answer toolbar.

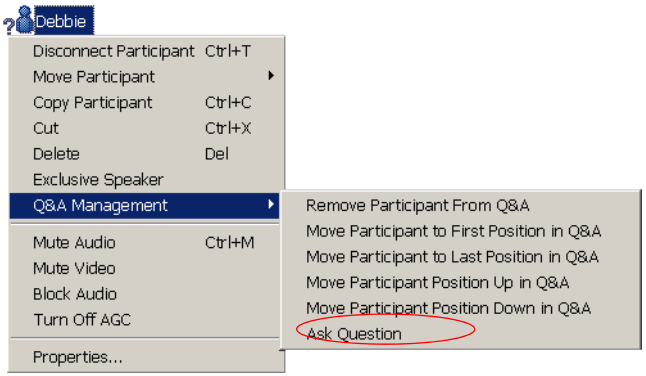
— Right-click the *Conference* icon, then click **Next Questioner**.



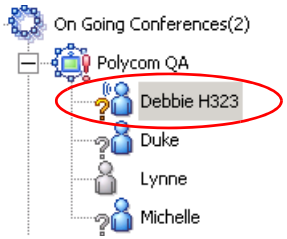
- On occasion, the operator can disregard the participants position in the queue and allow them to ask the question. To do this, the operator uses one of the following methods.

  — Click the *Participant* icon and then click the *Ask Question* button on the Question-and-Answer toolbar.

  — Right-click the *Participant* icon, click **Q&A Management**, and then click **Ask Question**.



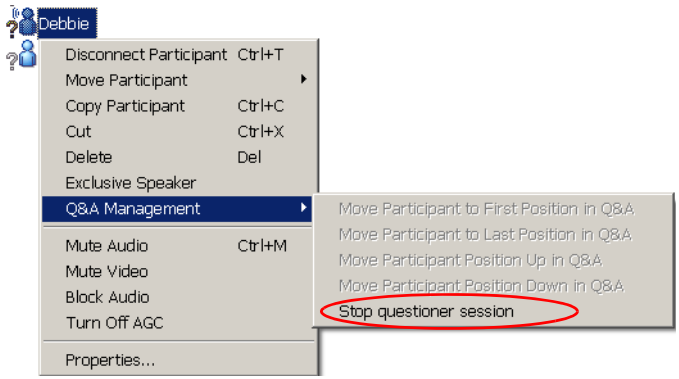
The selected participant's icon now indicates the change of status to *current questioner*:



Ending Participant Questions

Ending the questioner session can be done by participants or by the chairperson.

- The participant can indicate that they have completed asking the question and are waiting for the answer. To do this, the participant enters the appropriate code on the DTMF input device. The default code for this action is **#22**.
- The chairperson can stop the current questioner by pressing the appropriate DTMF code on the DTMF input device. The default DTMF code for this action is **#23**.
- The operator can end the questioner session by right-clicking the *Current Questioner* icon, clicking **Q&A Management**, and then clicking **Stop questioner session**.



- The operator can end the questioner session by clicking the *Current Questioner* icon and then clicking the *Stop Questioner* icon on the Q&A toolbar.

The selected participant's icon reverts to the passive/normal status.

Removing Participants from the Q&A Queue

You can remove a participant from the Q&A queue at any time during the Q&A session. In such a case, the session will continue as before but the participant will not be able to ask questions in this session. You can remove a participant in one of the following ways:

- Right-click the participant's icon, click **Q&A Management**, and then click **Remove Participant from Q&A**.
- Select the participant's icon, and then click the *Remove Participant from Q&A* button on the Q&A toolbar.

The participant's Q&A icon is replaced by the standard participant icon (according to the participant's role).

Clearing Q&A Queues

The chairperson and the operator can clear the Q&A queue at any given time during the Q&A session (remove the participants currently waiting to ask questions, from the queue) using the following methods:

- The chairperson can enter the appropriate code on the DTMF input device. The default code for this action is **#24**.
- The operator can click the *Clear Q&A* button on the Q&A toolbar.

The Q&A queue is emptied and all participant Q&A icons are replaced by standard participant icons (according to their role).

Managing Voting Sessions

In a voting session, participants express their preference on a set of choices using the touch-tone keypad or remote control during an On Going Conference. The system uses digits to correlate participant votes to the items for which they are voting.

A voting session can include up to 10 choices for one subject. Each choice is assigned a digit (between 0 to 9) and a descriptive title. For example, in an employees meeting, the employees have to vote for one of the benefit plans suggested by the management. Each plan is assigned a digit (for example, if there are 5 plans, the choices can be 0 to 4) and a short description.

A voting session consists of three main stages:

- *Preparation stage* - Before the voting session begins, the operator or the chairperson creates the list of choices and their descriptions. The operator or the chairperson then informs the conference participants of the choices available for selection and the digit assigned to each option.
- *Voting stage* - When voting, each participant enters the digit that represents the participant's choice, using the DTMF input device. As each vote is counted, the information is presented on-line in the Voting window.
- *Results stage* - When the voting is completed, the final results can be saved to a file.

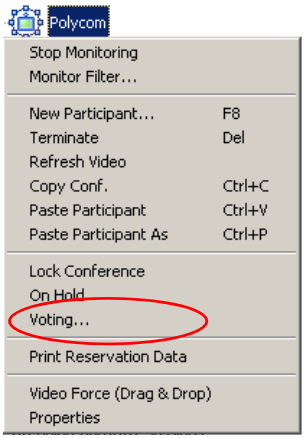
Voting sessions are available in IVR enabled conferences (that are run on Audio+ cards) and require the use of a DTMF input device.

Conducting a Voting Session

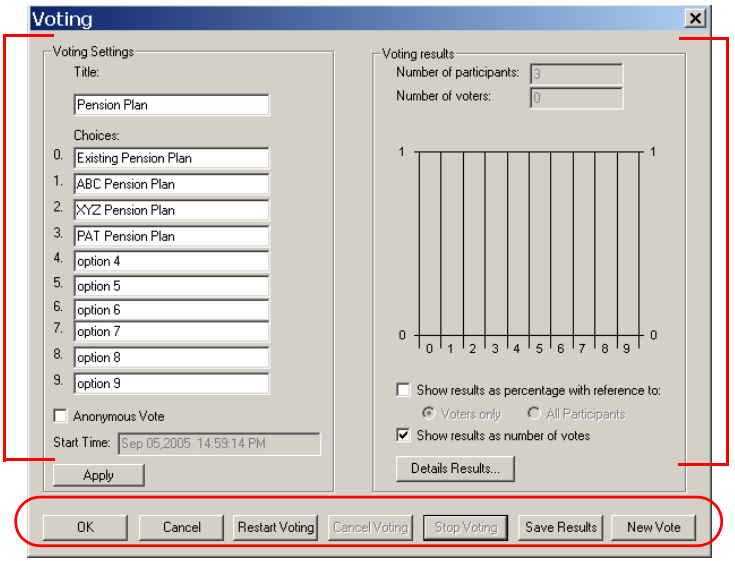
The operator or the chairperson manages the voting session.

To manage a voting session conference:

1. In the *Browser, Status* or *Monitor* panes, right-click the conference icon, and then click **Voting**.



The *Voting* dialog box opens.



The *Voting* dialog box is divided into three main sections:

— The *Voting Settings* pane - where you define the voting session parameters such as the voting subject and choices, and whether the voting is anonymous.

— The *Voting Results* pane - where the system displays the voting results, updating them as the voting session progresses. You can select the viewing mode of the voting results.

— *Command buttons* - where you click a button according to the operation to be performed.

2. In the Voting Settings pane, define the voting session parameters as follows:

Table 6-3: Voting Parameters

Field/Option	Description
Title	Type in the Voting subject. This title is also used as the file name when saving the results to a file.
Choices	The digits 0 to 9 on the left (which cannot be modified) represent the digit that should be pressed on the telephone keypad or the remote control. Enter a descriptive text for each of the choices to be selected during the voting session. For example, for digit 0 enter the first choice, for digit1 enter the second choice, etc. **Note:** This text will appear in the voting results and is saved in the text file together with the voting results.
Anonymous Vote	Select this check box to conduct an anonymous voting session.
Start Time	Displays the voting session start time.

3. Present the voting choices to the conference participants.

   Once the voting choices are clear to all, you can start the voting itself.

4. Click **Start Voting**.

   Alternatively, the chairperson can start the voting session from the touch-tone telephone or remote control (once the voting session parameters are

defined by the Operator or via the Web browser) by entering the appropriate DTMF code (the default code is ***81**).

Participants cast their votes using the DTMF input device, by entering the code that was assigned to their preferred choice.

You can cancel the voting anytime during the voting session by clicking the **Cancel Voting** button or by entering **#82** on the DTMF input device.

The results are shown in the *Voting Results* pane.

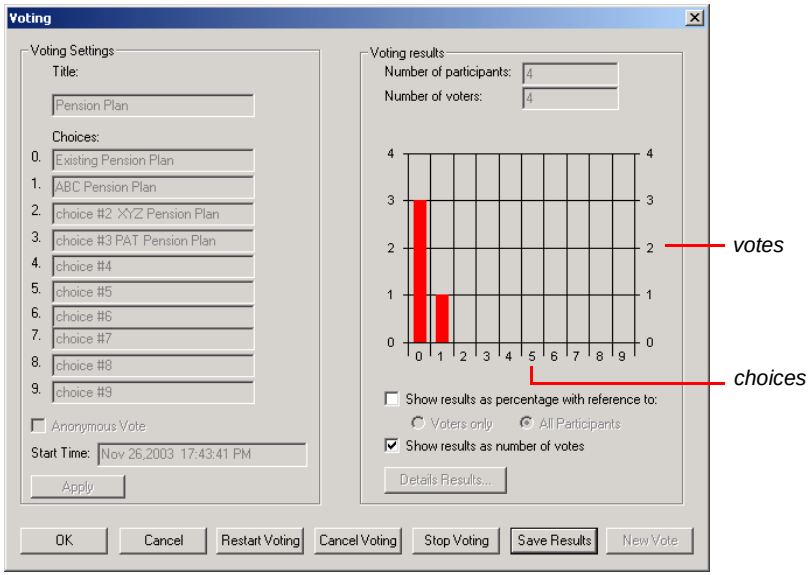


Table 6-4 describes the voting results options.

Table 6-4: Voting Results Display Options

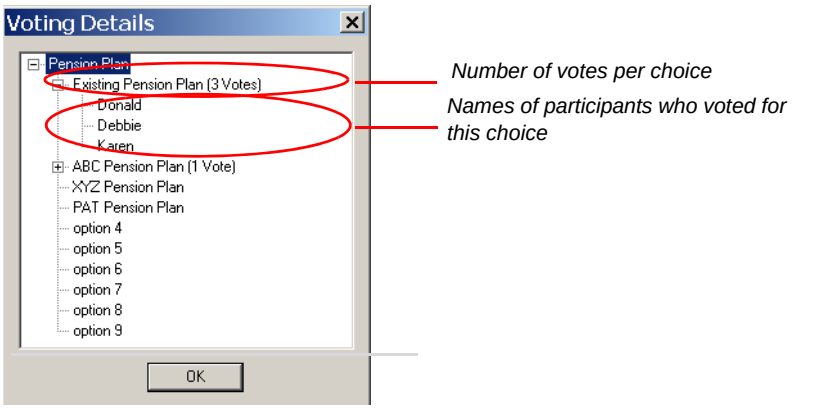
Field/Option	Description
Number of participants	Displays the number of participants currently connected to the conference.
Number of voters	Displays the number of participants who have already voted. This number is updated continuously according to the number of voters.

Table 6-4: Voting Results Display Options (Continued)

Field/Option	Description
Show results as percentage with reference to:	Select this check box to display the number of votes for each choice as percentage. If checked, select the category from which to calculate the percentage: • ***Voters Only*** - Displays the percentage of participants who voted for each choice, out of the total number of voters. • ***All Participants*** - Displays the percentage of participants who voted for each of choice, out of the total number of connected participants.
Show results as number of votes	Select this option to display the absolute number of votes cast for each choice.
Details Results	Click this button to display a summary of the voting results. **Note:** Detailed results can be viewed only when the **Stop Voting** button has been clicked to complete the voting stage.

5. Click the **Stop Voting** button to conclude the voting session. Alternatively, end the voting session by entering the appropriate code on the DTMF input device. The default code for this action is **#81**. At this point you can display the voting results on-screen and choose to save them to a file.
6. Click the **Details Results** button to display the full information about the results of the voting session.

The *Voting Details* window opens. For each option, the system displays the total number of votes.

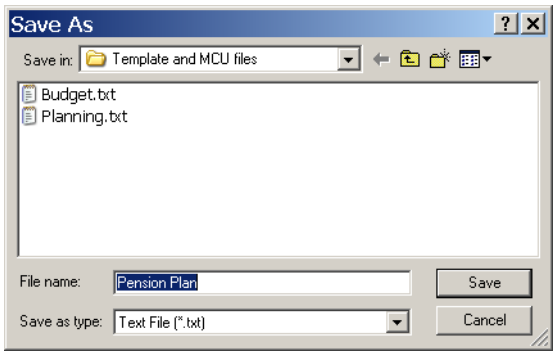


— If the vote was not anonymous, you can view the names of the participants who have voted for each of the listed choices. To display names, click the [+] icon next to the choice name.

— If the vote was anonymous, the system displays only the number of votes for each choice.

7. Click **OK** to close the *Voting Details* window.

8. In the *Voting* window, click the **Save Results** button to save the results to a text file.
The *Save As* dialog box opens. The *File Name* field displays the default name, derived from the voting session's title. You can modify this file name. The file can be saved only in the text or ASCII format (*.txt).

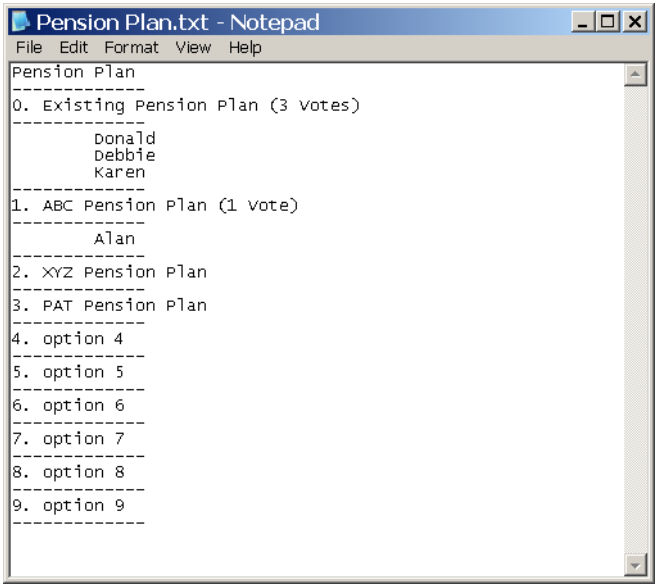


9. Using the standard Windows conventions, select the destination folder for the file, and then click **Save**.
10. At this point you can perform one of the following operations in the *Voting* window:
    a. Click **OK** to exit the voting session.
    b. Click **Restart Voting** to restart the voting on the same subject if the first voting session was interrupted or there is a need to recount the votes.
    c. Click **New Vote** to create a voting session for a new subject/item.

To view the voting results file:

- Using any word processor, open the text file.

  The following is a sample of a voting results text file.



Using DTMF Codes During a Conference

During an On Going Conference participants can perform various operations using touch-tone signals (DTMF codes).

- Participants can perform various operations using DTMF codes only if an IVR Service is assigned to the conference.
- The definition of operations that can be performed by all conference participants or just by the chairperson is done in the IVR Service - DTMF Codes assigned to the conference.
- The DTMF codes and the permission to use them can be modified for individual IVR Services.

Table 6-5 lists the operations that can be performed by all participants or the chairperson during an On Going Conference.

Table 6-5: Operations performed during a conference using DTMF codes

DTMF Function	DTMF Code	Permission
Request private assistance To request private assistance, press: star, zero.	*0	Everyone
Request assistance for conference To request operator's assistance for the conference, press: zero, zero.	00	Chairperson
Mute my line To mute your line, press: star, six.	*6	Everyone
Unmute my line To unmute your line, press: pound, six.	#6	Everyone
Lock conference To lock the conference to dial-in participants, press: star, seven, zero.	*70	Chairperson
Unlock conference To unlock the conference, press: pound, seven, zero.	#70	Chairperson

Table 6-5: Operations performed during a conference using DTMF codes

DTMF Function	DTMF Code	Permission
Secure conference To switch the conference to secure mode, press: star, seven, one.	*71	Chairperson
Unsecure conference To cancel the secure mode, press: pound, seven, one.	#71	Chairperson
Increase my broadcasting volume To increase your volume, press: star, nine.	*9	Everyone
Decrease my broadcasting volume To decrease your volume, press: pound, nine.	#9	Everyone
Mute All except me To mute all participants except yourself, press: star, five.	*5	Chairperson
Cancel Mute All except me To cancel mute settings of all participants except yourself, press: pound, five.	#5	Chairperson
Change password To change the chairperson or conference password, press: star, seven, seven.	*77	Chairperson
Place conference on hold To place the conference on hold, press: star, one.	*1	Chairperson
Reinstate on hold conference To reinstate a conference on hold, press: pound, one.	#1	Chairperson
Mute dial-in participant To mute dial-in participants, press: star, eight, six.	*86	Chairperson
Cancel Mute dial-in participant To cancel the muting of dial-in participants, press: pound, eight, six.	#86	Chairperson
Start voting session To start a voting session, press: star, eight, one.	*81	Chairperson
Stop voting session To end a voting session and get the results, press: pound, eight, one.	#81	Chairperson

Table 6-5: Operations performed during a conference using DTMF codes

DTMF Function	DTMF Code	Permission
New voting session To start a new voting session, press: star, eight, two.	*82	Chairperson
Cancel voting session To cancel the voting session, press: pound, eight, two.	#82	Chairperson
Ask a question To ask a question, press: star, twenty two.	*22	Everyone
Cancel my question To cancel a question, press: pound, twenty two.	#22	Everyone
Next in line question To let the next questioner ask a question, press: star, two three.	*23	Chairperson
End current question To terminate the current question, press: pound, two three.	#23	Chairperson
Cancel all questions To cancel all questions, press: star, two, four.	*24	Chairperson
Dial out to invitee To dial out to invitee, press: star, four.	*4	Chairperson
Admit invitee and continue dial-out To admit an invitee and continue dial-out press: star, one.	*1 (submenu)	Chairperson
Disconnect invitee and continue dial-out To disconnect an invitee and continue dial-out, press: star, two.	*2 (submenu)	Chairperson
Admit invitee and return to the conference To admit an invitee and return to the conference, press: star, three.	*3 (submenu)	Chairperson
Disconnect invitee & return to conference To disconnect an invitee & return to conference press: star, four.	*4 (submenu)	Chairperson
Invite H323 To dial-out to H.323 participants and invite them to the conference.	*35	Chairperson

Table 6-5: Operations performed during a conference using DTMF codes

DTMF Function	DTMF Code	Permission
Invite ISDN To dial-out to ISDN participants and invite them to the conference.	*36	Chairperson
Invite MPI To dial-out to MPI participants and invite them to the conference.	*37	Chairperson
Invite SIP To dial-out to SIP participants and invite them to the conference.	*38	Chairperson
Disconnect Invitee To disconnect the most recently invited participant.	#35	Chairperson
Play Menu To play the DTMF help menu, press: star, eight, three. (To enable this feature the relevant file must be assigned to the function in the IVR Message Service.)	*83	Everyone
Enable Roll Call To enable Roll Call, press: star, three, two. **Disable Roll Call** To disable Roll Call, press: pound, three, two.	*32 # 32	Chairperson Chairperson
Roll Call - review names To initiate the roll call and playback of the participant names, press: star, three, three. **Roll Call - stop review names** To end playback of participant names, press: pound, three, three.	*33 #33	Chairperson Chairperson
Start Dial Out To start the dial-out, press: star, two, five.	*25	Chairperson
Conference Termination To end the conference, press: star, eight, seven.	*87	Chairperson
Start Click&View To start the Click&View application, press: star, star.	**	Everyone

Table 6-5: Operations performed during a conference using DTMF codes

DTMF Function	DTMF Code	Permission
Change to Chairperson To change the status of a participant to Chairperson, press: star, seven, eight.	*78	Everyone
Increase my listening volume To increase your volume, press: star, seven, six. **Decrease my listening volume** To decrease your volume, press: pound, seven, six.	*76 #76	Everyone Everyone
Override Mute All But Me* To enable participants to unmute their endpoints while the Exclusive Speaker Mute mode is imposed. * To enable this function, a DTMF code must be configured. These operations are listed and defined in the *IVR Service - DTMF Codes* dialog box. The same operations are also available from the MGC Manager application. For a description of the IVR Message Service setup, see Chapter 6, “IVR and Entry Queue Services”.		Everyone

Table 6-5: Operations performed during a conference using DTMF codes

DTMF Function	DTMF Code	Permission
SilenceIT Menu The DTMF code to be used to play the SilenceIT menu. This code is used by the participant that who is muted due to a noisy line.	9	Everyone
Unmute and Return to Conference Unmutes and returns the participant to the conference.	1	Everyone
Return to Conference Muted Returns the muted participant to the conference while remaining muted.	2	Everyone
Adjust SilenceIT Sensitivity and Unmute Used by the muted participant to return to the conference unmuted while reducing the noise detection sensitivity. This option should be used if you do not want the system to identify a faint noise as a noisy line.	3	Everyone
Disable SilenceIT and Unmute Disables the SilenceIT option, unmutes the line of the participant who is placed on hold by the SilenceIT mode and returns the participant to the conference.	4	Everyone
Start Recording Starts a recording session.	*73	Chairperson
Stop Recording Stops a recording session.	*74	Chairperson
Pause Recording Pauses a recording session.	*75	Chairperson

These operations are listed and defined in the *IVR Service - DTMF Codes* dialog box. The same operations are also available from the MGC Manager application.

For a detailed description of IVR enabled conferences, see the *MGC Manager User's Guide Volume II, Chapter 2, "IVR and Entry Queue Services"*.

Changing the Conference or Chairperson Password

During an On Going Conference, the conference password or the chairperson password can be modified by the chairperson or by a participant (depending on the user permissions), using DTMF codes.

When the user enters the DTMF code which activates the password modification process, a voice message instructs the user to select whether to modify the conference password or the chairperson password.
A sequence of voice messages and chairperson actions follows, to complete the password modification. Table 6-6 describes this sequence:

Table 6-6: Password Modification DTMF/IVR Sequences

User Action	IVR Message
Chairperson or participant enters the "change password" DTMF code.	"Press one to change conference password. Press two to change the chairperson password. Press nine to exit the menu."
Chairperson or participant enters 1.	"Please enter the new conference password. Press the pound key to complete."
Chairperson or participant enters 2.	"Please enter the new chairperson password. Press the pound key when complete."
Chairperson or participant enters 9 and exits the menu.	
Chairperson or participant enters the new password. Password confirmation request.	"Please re-enter the new password. Press the pound key to complete."
Chairperson or participant confirms the password. System confirms update.	"The password has been successfully changed."
While confirming the new password, chairperson or participant enters the existing password.	"The new password is invalid."

If the user exits without confirming the password, the password is not updated.

Changing passwords is not possible when a conference is in any of the following modes:

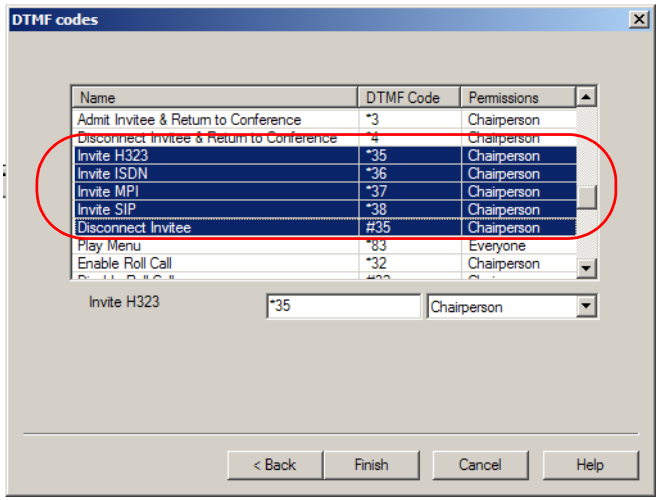
- Voting session
- Invite session
- Roll Call session
- A participant is waiting in the Entry Queue

In an Entry Queue, both the conference and chairperson password need to be unique and cannot be identical to any other conferences that are accessed via the Entry Queue.

Inviting Video Participants

Video Invite enables participants (usually the Chairperson), from any endpoint (H.323, H.320, SIP, MPI), in a video conference to invite participants into the conference.

By default, Invite options are automatically enabled in the IVR Service with the appropriate DTMF codes. To invite H.323, ISDN, MPI and SIP participants to the conference, the chairperson (or participant) dials ***35/*36/ *37/*38**, and once the dial tone is heard, enter the dial string of the invitee's endpoint as shown in Table 6-7, "Invite Dial String Format.". With Invite, participants are connected using the appropriate default IP, ISDN and MPI Network Service.



The DTMF codes can be modified, or deleted if you want to disable the Video Invite feature.

- To invite Audio Only PSTN participants, use the **Audio Invite** DTMF options (*4).
- The simplified Ad Hoc Conferencing option introduced in version 8.0 can also be used to invite ISDN, MPI and SIP participants. For more details, see the MGC Manager User's Guide Volume I, Chapter 6, Setting the Video Invite Options in the IVR Service.

Table 6-7: Invite Dial String Format

Endpoint Network Type	DTMF Code	Dial String Format
H.323 endpoint	****35***	The participant (inviter) dials *35, followed by the E.164 alias (i.e. 1141) or IP address and a pound key. For example: • Using the E.164 Alias - *35<dialtone>1141# **Note**: The invitee endpoint must be configured with an E.164 alias, and this alias must be registered to the same gatekeeper as the MCU. • The endpoint's IP address (172.22.176.11) dial string, substituts the periods (.) with asterisk's (*) - *35<dialtone>172*22*176*11# **Note**: Endpoint registration with the gatekeeper is not required.
ISDN endpoint	****36***	The participant dials *36 followed by the ISDN number (i.e. 9925100) and pound key. For example: *36<dialtone->99251000#
MPI endpoint	****37***	The participant dials *37 followed by the service number (MPI number), astrisks (*), and pound key. For example: *37<dialtone>5000*12345678#
SIP endpoint	****38***	The participant (inviter) dials *38, followed by the E.164 alias or IP address and pound key. For example: • E.164 Alias - *35<dialtone>1141# Note: The User Name (E.164 prefix) must be in a numeric format and the domain name is the IP Service SIP server domain name. • The endpoint address dial string, substitute periods (.) with an asterisk (*). - *35172*22*176*11#

Video Invite can be used in Video Conferences to which an Invite-enabled IVR Service is assigned. Video Invite is enabled for the conference in the *Properties -Settings* dialog box as for Audio Only and H.323 participants.

Disconnecting Invited Participants

To disconnect the last invited video participant (and not the last dial in participant), enter the DTMF code **#35**, for all invitee types. Each time you enter #35, the system disconnects the most recent invited participant.

Invite Mode Exit

The system automatically exists the video invite mode and returns the inviter to the ongoing conference when :

- A dial tone is heard, but no DTMF code is pressed within 5 seconds
- When a DTMF code is activated but no number is entered within 10 seconds
- The pound (#) key is pressed directly after the DTMF code (i.e. *36#)
- A wrong number is dialed or the pound (#) key is not pressed at the end of the dialed number
- No MCU recources. In such a case an error tone is heard.
- For the Disconnect Invitee option, ensure that **#35** and the permission level to disconnect the last invited participant are selected.

Managing Secure Mode Conferences

In the Secure mode, joining the conference, monitoring the conference or controlling the conference in any way, is denied to outside participants, including operators. In addition, operators cannot view the participants list or any conference properties while the conference is in the Secure mode. However, operators can terminate the conference even in this mode.

Special icons are used to indicate that a conference is in Secure mode. For a list of these icons see Table 5-7 on page 5-29.

Chairpersons can enable or disable the Secure mode for an On Going Conference, using the appropriate DTMF codes on the touch-tone telephone. While the conference is in a Secure mode, the chairperson and conference participants can perform various operations using the appropriate DTMF codes, such as voting or question-and-answer sessions. These operations will not be displayed in the MGC Manager monitoring panes. Once the chairperson secures or unsecures the conference, an appropriate voice message may be played indicating that the conference is secured.

The voice message will be played only if it is configured in the IVR Message Service and if the appropriate audio file has been downloaded to the Audio card.

When the chairperson secures the conference, the following operations cannot be performed by operators or outside participants:

- Join or attend the conference
- View and control the participants of the conference
- View and monitor the conference properties
- Implement Voting

Operations Performed During On Going Gateway Sessions

On the conference level, you can terminate the gateway session in the same way as with the standard conference.

On the participant level, you can perform the following operations, in the same way as with the standard conference:

- Mute or unmute the participant audio channel. For details, see page 6-25.
- Mute or unmute the participant video channel. For details, see page 6-27.
- Delete the participant from the conference (this will cause the termination of the gateway session).

7

Meet Me per Conferences and Meeting Rooms

Meet Me Conferences are conferences that allow undefined dial-in participants to connect to them by dialing a predefined number. They are defined once, and when the conference ends, they are deleted from the MCU.

Meeting Rooms are reserved conferences, based on Meet Me Conferences without resource allocations. Meeting Room conferences are defined once but can be activated many times, when required.

When using the *Meet Me Per Conference* option, there is no need to specify the capabilities of each endpoint – they are automatically detected and are assigned the conference parameters. Any participant who dials the conference number can connect to the conference until all the MCU resources are utilized or the maximum number of participants per conference is reached. However, resources may be reserved for a specific number of undefined participants. In such a case, additional undefined participants may be allowed to join the conference if there are enough resources available.

Defining a Meet Me Conference

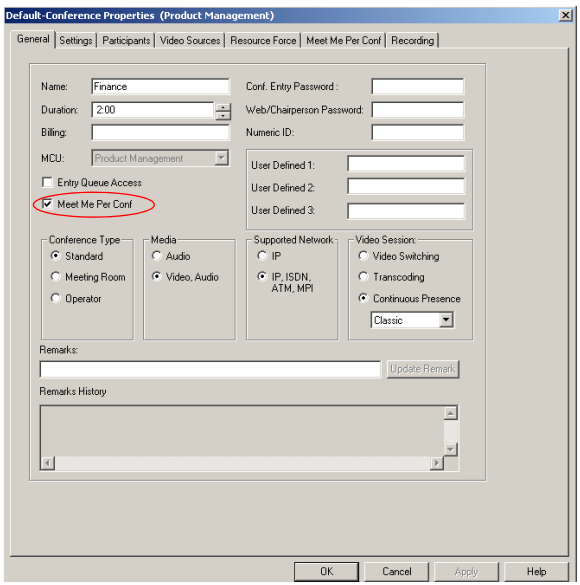
The **Meet Me Per Conference** option is enabled in three stages:

- Enabling the Meet Me Per Conference option in the *Conference Properties - General* dialog box.
- Specifying that undefined participants may connect to the conference in the *Conference Properties - Participants* dialog box and defining the number of participants (if any) for which MCU resources should be reserved. You can also define the maximum number of participants allowed in the conference.
- Defining the conference dial-in number(s) in the *Conference Properties - Meet Me Per Conference* dialog box.

You can also create a Meet Me Reservation or Reservation template.

To define a new Meet Me Conference:

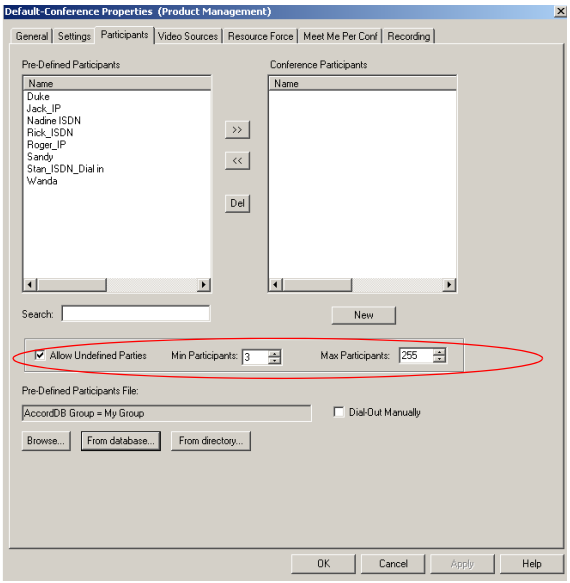
1. In the *Browser* pane, expand the MCU tree.
2. Right-click the *On Going Conferences* icon, and then click **New Conference**.
   The *Conference Properties - General* dialog box opens.



3. Define the conference general parameters such as conference *Name*, *Duration*, *Passwords* (if required), and *Numeric ID*. You may also define the user defined fields if they are enabled in your system. For more details, see Chapter 4, "To define the conference General parameters:" on page 4-21.

The numeric ID (or the conference name) is used as part of the dialing string by H.323 dial-in participants in the Advanced dial-in mode. For details, see Chapter 4, "Conference Access via Entry Queue" on page 4-78.

4. Select the **Meet Me Per Conf** check box.
5. Select the conference, Media (Audio Only or Video), Network, and Video Session, as described for On Going Conferences. For details see Table 4-4, "Conference Properties - General," on page 4-22.
6. Click the **Settings** tab.
   The *Conference Properties - Settings* dialog box opens.
7. Define the conference settings parameters as for any Standard video conference. For more details see Table 4-5, "Conference Properties - Settings Parameters," on page 4-29.
8. Click the **Participants** tab.
   The *Conference Properties - Participants* dialog box opens.



9. If required, add defined participants to the conference as for On Going Conferences. For more details, see *Table 4-8, "Conference Properties - Participants Options," on page 4-48.*
10. Define the following participant parameters:
    - Select the **Allow Undefined Parties** check box to allow participants to connect to the conference without prior setting of their parameters (i.e., "undefined" participants).
    - In the *Min Participant* box, define the number of participants for which the system should reserve resources, including defined and undefined participants. This option is enabled when the *Allow Undefined Parties* option is selected. If you enter "0", no resources will be reserved for the conference. However, participants are able to connect to the conference if there are available resources.

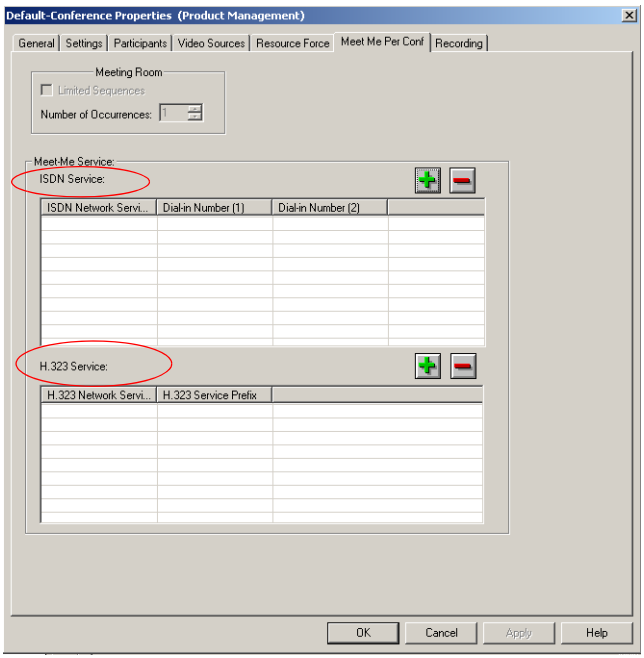
      To reserve resources for 2 defined participants and three undefined participants, enter five (5) as the minimum number of participants.
    - In the *Max Participants* box, enter the maximum number of participants that can connect to the conference at one time. By default, this option is set to **Auto** to allow as many participants as possible.
    - The number of participants is limited by the maximum number of participants set in the Max Participants field, or by the maximum number of participants allowed for the conference (depending on the Audio and Video cards installed on the MCU) or by the MCU resources being used up.

During an On Going Conference, you can also limit the number of participants by locking the conference to additional dial-in participants. For more details, see Chapter 6, "Locking/Unlocking a Conference" on page 6-54.

11. If you are defining a Continuous Presence and/or Lecture Mode conference, click the **Video Sources** tab. For more details see *Chapter 4, "Conference Properties - Video Sources - CP Layout Menus" on page 4-56.*

    Define the Video Layout and other video settings.

12. Click the **Meet Me Per Conf** tab.
    The *Conference Properties - Meet Me Per Conf* dialog box opens.



13. Define the dial-in numbers or the H.323 Network Service to be used by participants to connect to the conference as described in *"Defining Conference Dial In Numbers for ISDN/PSTN/T1-CAS Connections" on page 7-5*.

14. Click **OK**.

Defining Conference Dial In Numbers for ISDN/PSTN/T1-CAS Connections

The conference phone numbers may be assigned by the operator or automatically by the system. When allocated by the system, a single number, which is derived from the dial-in numbers defined in the ISDN/T1-CAS Network Service, is assigned to the conference. The assigned dial-in number can only be viewed in the *Status* or *Monitor* panes of the Main Window, once

the conference or reservation is saved on the MCU. This number is then given to all ISDN conference participants to use for connecting to the conference. You can manually assign a dial-in number to the conference in the *Conference Properties - Meet Me Per Conf* dialog box.

If participants in the same conference use different ISDN Network Services, the conference may be assigned different dial-in numbers for each of the ISDN Network Services used to connect to the conference. In such a case, use the manual allocation method.

If the conference includes T1-CAS audio only participants and the MCU is configured to allow T1-CAS participants in video conferences, you can manually allocate the dial-in number for the T1-CAS participants.

T1-CAS participants can only dial-in to a conference using a Meet Me Conference as undefined participants.

The list of dial-in numbers assigned to the conference is displayed in the *Meet-Me Services* table. The first column displays the ISDN Network Service name. The *Dial-in Number (1)* and *Dial-in Number (2)* columns display the first and second dial-in numbers assigned to the conference, for each listed Network Service.

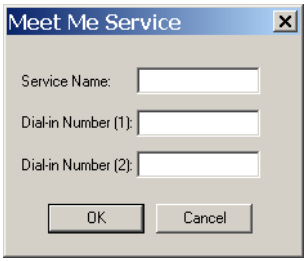
If no dial-in number is defined, the system automatically assigns the first free number in the dial-in numbers range defined in the default ISDN Network Service.

Before you manually allocate dial-in number(s) to the conference, check the ISDN/T1-CAS Network Service for the dial in numbers that can be allocated to conferences.

To manually allocate a dial-in number to the conference:

The following procedure is optional and should be used only if you want to manually allocate a specific number to the conference. Otherwise, skip this procedure and the MCU automatically allocates the dial-in number.

1. In the *Conference Properties - Meet Me per Conf* dialog box, in the *Meet Me Service - ISDN Service* pane, click the **Plus** button. The *Meet Me Service* dialog box opens.



2. Define the dial-in numbers to be assigned to the conference as follows:

Table 7-1: Meet Me Service Options

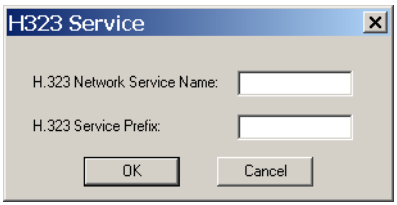
Option	Description
Service Name	Enter the name of the ISDN or T1-CAS Network Service to be used by participants to connect to the conference exactly as it is defined in the *Network Services* list (the system is case sensitive).
Dial-in Number (1)	Enter the first dial-in number to be assigned to the conference. This number must be defined in the dial-in numbers range defined for the selected ISDN or T1-CAS Network Service. For more details regarding the dial-in numbers range, see the *MGC Administrator's Guide, Chapter 3*. **Note:** When connecting ISDN lines via a private PBX to the MCU, the PBX may truncate the dialed numbers. In that case, the dial-in numbers defined in the ISDN Network Service may include only part of the dialed string. The operator must add the truncated digits to the dial-in number conveyed to the participant.
Dial-in Number (2)	Enter the second dial-in number to be assigned to the conference. This number is optional.

3. Click **OK**. The dial-in numbers are added to the table in the *Meet Me Service - ISDN Service* pane.
4. If participants use more than one ISDN Network Service to connect to the conference, repeat steps 1 to 3 to define dial-in numbers for these additional ISDN Network Services.

To manually assign H.323 Service Prefixes to the conference:

H.323 dial-in participants can dial into Meet Me Conferences by simply dialing the H.323 Prefix (from the IP Network Service) and the conference Numeric ID or the conference name. For more information, see *Chapter 4, "Conference Direct Dialing and Access" on page 4-75.*

1. In the *Conference Properties - Meet Me per Conf* dialog box, in the *Meet Me Service - H.323 Service* pane, click the **Plus** button. The *H.323 Service* dialog box opens.



2. Define the dial-in H.323 Service Prefix to be assigned to the conference as follows:

Table 7-2: H.323 Network Service Options

Option	Description
H.323 Network Service Name	Enter the name of the IP Network Service to be used by participants to connect to the Conference exactly as it is defined in the IP Network Services list (the system is case sensitive).
H323 Service Prefix	Enter the H.323 prefix (from the IP Network Service) to be assigned to the conference. This number must be defined in the H323 dialog box of the selected IP Network Service.

3. Click **OK**. The H.323 Service Prefix is added to the table in the *Meet Me Service - H.323 Service* pane.

4. If participants use more than one IP Network Service to connect to the conference, repeat steps 1 to 3 to define H.323 Service Prefixes for these additional IP Network Services.
5. In the *Conference Properties* dialog box, click **OK** to complete the conference definition.

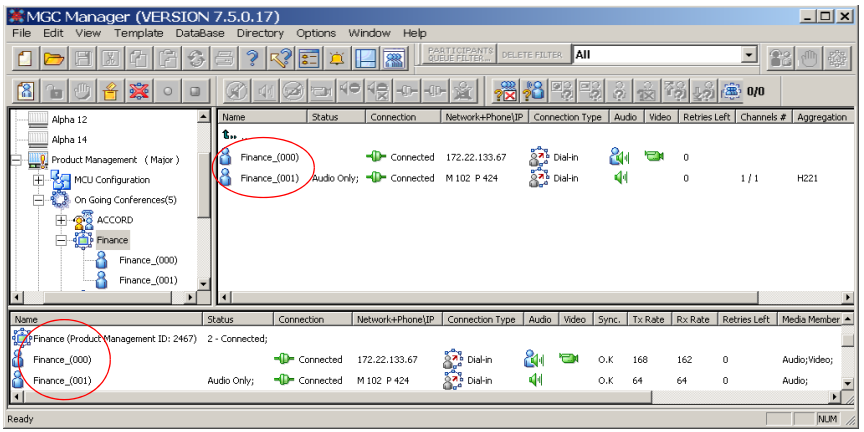
To delete a service name or dial-in number from the conference:

1. In the *Conference Properties - Meet Me per Conf* dialog box, select the ISDN/IP Network Service name or dial-in number to delete.
2. Click the associated **Minus** button.
   The service name and dial-in numbers are removed from the conference definition.

Monitoring Meet Me Conferences

When an undefined ISDN participant in a Meet Me Conference dials into the conference, the system tries to connect the participant using the Bonding or H.221 protocol. If the connection uses the Bonding protocol, during the negotiation with the endpoint the number of additional channels to be connected is communicated, and the connection proceeds as in a standard Bonding connection.

When connecting to the conference, the name of an *Undefined* participant appears in the format <conference name_(X)> where X is the participant's sequential number. For example, if the conference name is Finance, the name of the first participant to connect to the conference is "Finance_(000)".


MGC Manager (VERSION 7.5.0.17)
File Edit View Template DataBase Directory Options Window Help
Alpha 12
Alpha 14
Product Management (Major)
MCU Configuration
On Going Conferences(5)
ACCORD
Finance
Finance_(000)
Finance_(001)
Name Status Connection Network+Phone\IP Connection Type Audio Video Retries Left Channels # Aggregation
Finance_(000) Connected 172.22.133.67 Dial-in 0
Finance_(001) Audio Only; Connected M 102 P 424 Dial-in 0 1 / 1 H221
Name Status Connection Network+Phone\IP Connection Type Audio Video Sync. Tx Rate Rx Rate Retries Left Media Member
Finance (Product Management ID: 2467) 2 - Connected;
Finance_(000) Connected 172.22.133.67 Dial-in O.K 168 162 0 Audio;Video;
Finance_(001) Audio Only; Connected M 102 P 424 Dial-in O.K 64 64 0 Audio;
Ready
NUM

In the *Monitor* pane, the *Participant Numbers\IP Address\SIP Address* column shows the number or IP address dialed by a participant to connect to the conference. When ISDN participants dial in to the Meet Me Per Conference, their CLI number as identified by the MCU appears with the prefix *P.* The conference/MCU number dialed by the participant appears with the prefix *M*.

In a dial-out connection, this column shows the participant's number dialed by the MCU to connect the participant to the conference.
All the operations that can be performed during a standard conference may be performed during an On Going Meet Me Conference.

Meeting Rooms

A Meeting Room is a *Meet Me Per Conference* saved on the MCU in passive mode, without using any of the system resources. It may be activated endlessly, or you can define the number of activations. The Meeting Room is set to 2-hour duration and is generally intended for undefined dial-in participants.

The Meeting Room is automatically activated when the first participant dials in. Other participants may join the conference by dialing in. If dial-out participants are also defined for the conference, the system automatically dials out to these participants the moment the conference is activated. The operator or conference initiator may lock the conference to additional dial-in participants at any time. An IVR-enabled Meeting Room can be configured to start only when the chairperson connects to the Meeting Room. In that case, participants connecting to the Meeting Room conference prior to the chairperson's connection are placed on hold, hear background music (when available) and see the Welcome video slide (in video Meeting Room conferences). If the chairperson does not connect in a predefined time period the conference is automatically terminated. The time period (default is 20 minutes) is defined in the "system.cfg": Greet and Guide/IVR section by the LEADER_WAITING_TIME_OUT flag.

The conference is automatically terminated when the last participant quits the conference (if *Auto Termination* is selected or in an IVR-enabled conference, when the chairperson exits the conference), or manually by the operator, or conference initiator. Once the conference is terminated, the MCU checks the conference recurrence setting. If the conference is still valid for re-activation, the conference resumes its passive state, waiting for another initiating call. Otherwise, the Meeting Room is deleted from the MCU. The operator can delete a Meeting Room from the Meeting Rooms list.

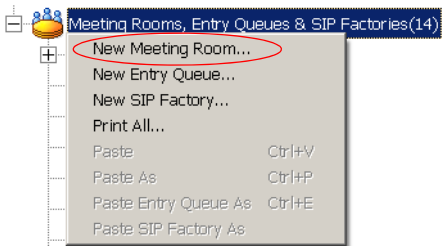
The Meeting Room can be accessed directly, or via an Entry Queue. For direct dialing in, an ISDN number and an IP Network Service Prefix are assigned to the meeting Room in the same way as for *Meet Me Per Conference*. For details see *Chapter 4, "Joining an On Going Conference" on page 4-70.*

- The Meeting Room is not erased when the MCU is reset.
- Meeting Rooms can be defined only if the appropriate *Customer Permission* is defined in the "*system.cfg*" file.

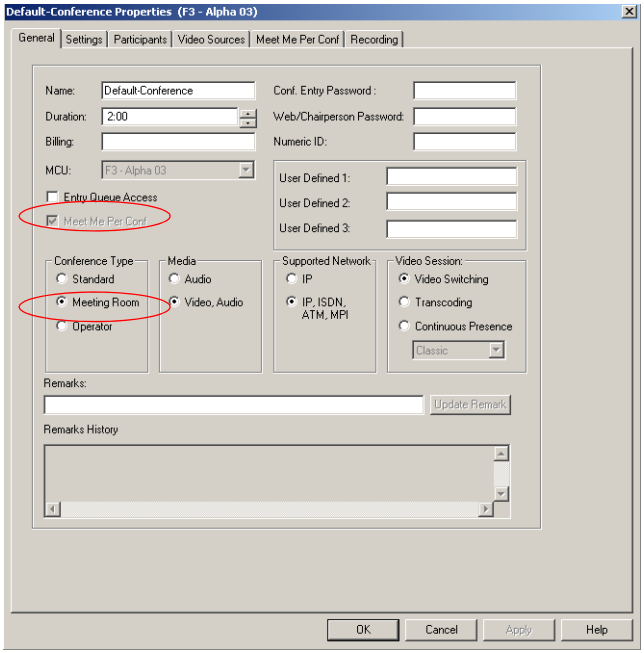
Defining a New Meeting Room

To define a new Meeting Room:

1. In the MCU tree, right-click the *Meeting Rooms, Entry Queues & SIP Factories* icon, and then click **New Meeting Room.**



The *Conference Properties - General* dialog box opens.



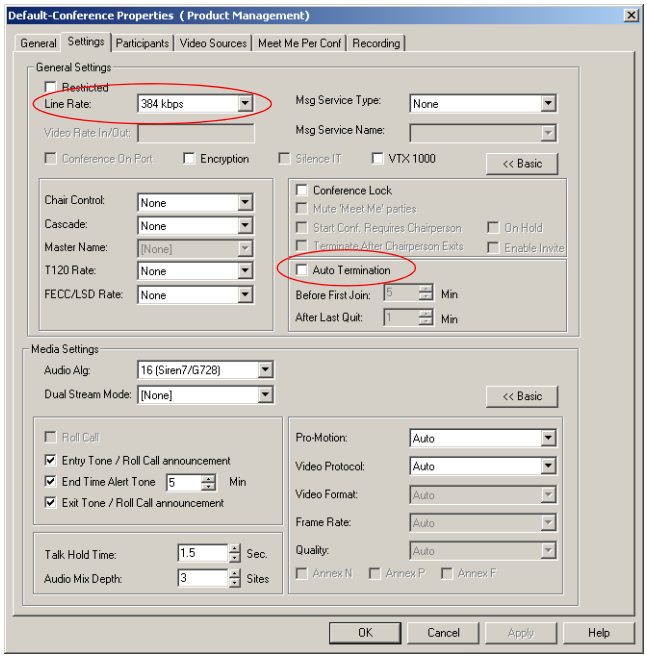
The **Meeting Room** option is automatically selected in the *Conference Type* box. The **Meet Me Per Conference** check box is automatically checked.

2. Define the Meeting Room *Name* and *Duration*.The default *Duration* is set to 2 hours but may be modified. The maximum duration that can be set for a Meeting Room is 99 hours.
3. Define the *Billing Code* if applicable.
4. Select the *Entry Queue Access* check box to connect to the Meeting Room via an Entry Queue. If you select this check box, the **Meet Me per Conf** check box is enabled. Clear this check box if you do not want to allocate an additional dial-in number (for direct dial-in) to the conference, and force the access to the conference only through the Entry Queue.

If the Meeting Room is accessed via an Entry Queue, its line rate must be the same as the Entry Queue properties, otherwise participants will not be able to move from the Entry Queue to the Meeting Room.

5. If Entry Queue Access is selected (and *Password* is used as the routing method) or it is an IVR-enabled Meeting Room with password request, enter the Conference Entry Password and the Chairperson Password (optional). If you leave these fields blank, the MCU allocates them once the Meeting Room is saved to the MCU.
6. Enter the conference Numeric ID. If left blank the system automatically allocates the Numeric ID once the Meeting Room is saved on the MCU.
7. If relevant, enter the information in the *User Defined* fields.
8. Define the Media type as *Audio* or *Video and Audio.*
9. Select the video session type as in a standard video conference. For more details *see Chapter 4, "To define the conference General parameters:" on page 4-21*.
10. Click the **Settings** tab.

The *Conference Properties - Settings* dialog box opens.



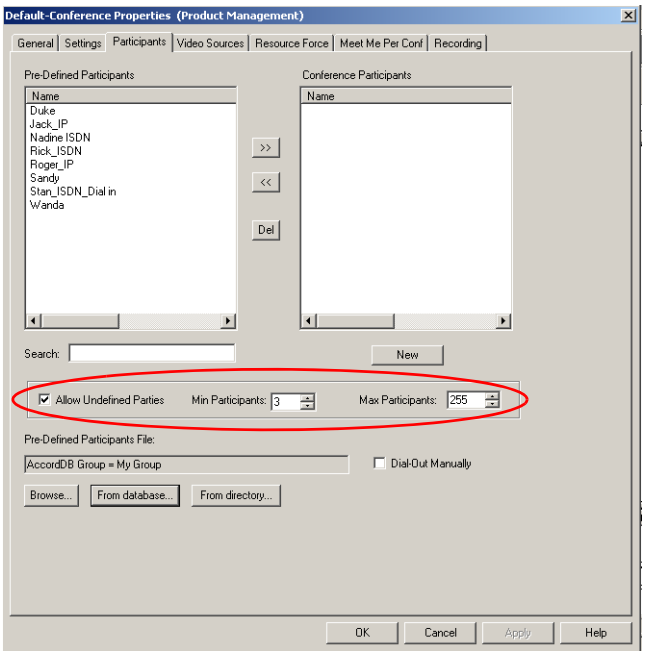
The Meeting Room settings are defined in the same way as a Standard On Going Conference.

11. Define the correct conference *Line Rate*.
12. If the MCU includes an Audio+ card and you want participants to control their conference via their endpoints, assign an IVR Service to the Meeting Room.

    It is recommended to enable the *Auto Termination* parameters for this type of conference to make sure that the conference ends when participants are no longer connected to the conference.
13. When an IVR Service is assigned, select the *Start Conf. Requires Chairperson* and *Terminate After Chairperson Exits* options (optional).

    For a detailed description of the Settings parameters, see Chapter 4, “To define the conference media and additional settings:” on page 4-29.
14. Click the **Participants** tab to define the participant connection to the conference.

The *Conference Properties - Participants* dialog box opens.

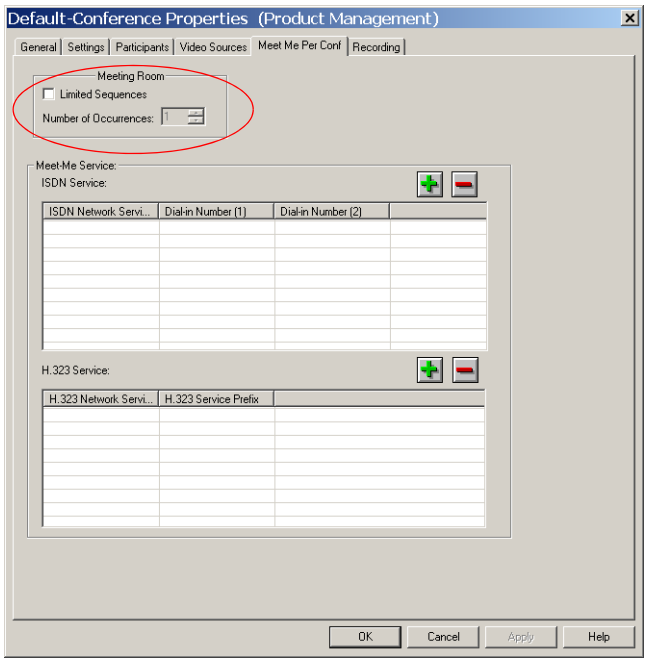


The *Allow Undefined Parties* check box is automatically selected to allow undefined participants to connect to the conference without the prior setting of their parameters.

The remaining parameters are the same as those for the Meet Me Per Conference definition. For more details, see *Chapter 4, "To add participants to the conference:" on page 4-47.*

15. If you have selected *Continuous Presence* as the conference *Video Session*, click the **Video Sources** tab to select the appropriate Video Layout for the conference. For more details, see *Chapter 4, "To define the Video Sources settings:" on page 4-54.*

16. Click the **Meet Me Per Conf** tab.
The Meet Me Per Conf dialog box opens.



This dialog box enables you to define the Meeting Room's specific parameters.

17. Select the **Limited Sequences** check box to limit the number of activations. If this check box is cleared, the number of activations is unlimited, and the Meeting Room can be saved on the MCU forever or until deleted from the MCU.

18. In the *Number of Occurrences* box, enter the number of Meeting Room activations. 0 means that the conference has an unlimited number of activations and can be in sleep mode (passive) forever.

    1 means that the conference will be activated once, and then it will be deleted from the system. 2 or more means that the conference will be activated twice or more, and the conference will remain in sleep mode (passive) in between recurrences.

19. If you have selected *Meet Me Per Conference* instead of, or in addition to, *Entry Queue Access*, and you want to manually assign the dial in

numbers, use the same method as described in *"Defining Conference Dial In Numbers for ISDN/PSTN/T1-CAS Connections" on page 7-5*.

20. Click **OK** in the *Meeting Room Properties* dialog box to complete the Meeting Room definition.
21. The new Meeting Room is added to the Meeting Rooms list.

- If you try to define a Meeting Room without the appropriate customer permission, a system indication is displayed, informing that you do not have the Virtual Conference Suite installed in your system.
- Up to 2000 Meeting Rooms can be defined per MCU.
- The Meeting Room will fail to start when the dial in number allocated to the conference is in use by another reserved conference, or if the MCU has run out of resources.

Using Meeting Rooms for Ad Hoc Conferencing in Avaya Environment

Ad hoc conferencing is enabled in Avaya environment using Meeting Rooms.

The administrator must configure the ACM and MGC for Ad Hoc conferencing.

In the MGC Manager, define one or several new Meeting Rooms. In the Avaya Call Manager (ACM) application, define the video conferencing parameters using the the names of the Meeting Rooms defined in the MGC Manager.

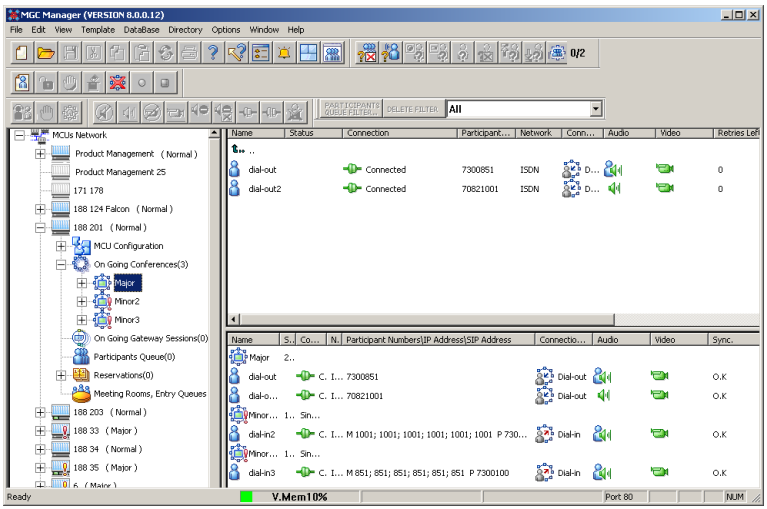
Once Avaya endpoints request to start a video conference, the Avaya Call Manager (ACM) will initate a call to the one of the Meeting Rooms configured in its application.

Listing Meeting Rooms

To view the Meeting Room list:

1. In the MCU tree, expand the *Meeting Rooms, Entry Queues & SIP Factories* tree.
   When the Meeting Room is activated, it is also added to the On Going Conferences list to enable the operator to monitor its status and its participants.

Monitoring active Meeting Rooms is similar to monitoring any other *Meet Me* Conference. For details, see *"Monitoring Meet Me Conferences" on page 7-10*.



Meeting Room Icons

The following icons indicate the different statuses of Meeting Rooms:

Table 7-3: Meeting Room Types and Icons

Icon	Description
	Meeting Rooms, Entry Queues & SIP factories. A category in the MCU tree that lists the Meeting Rooms, Entry Queues and SIP Factories defined in the system.
(green)	*Active Meeting Room - Video*. A video Meeting Room that was activated when the first participants or chairperson connected to it.
(green)	*Active Meeting Room - Audio.* An Audio Only Meeting Room that was activated when the first participants or chairperson connected to it.
(gray)	*Passive Meeting Room - Video.* A video Meeting Room that is in a passive mode, waiting to be activated. This Meeting Room uses both Audio and Video media.
(gray)	*Passive Meeting Room - Audio.* An Audio Only Meeting Room that is in a passive mode, waiting to be activated.

Meeting Room Right-Click Functions

The following options are available when right-clicking the Meeting Rooms icon:

Table 7-4: Meeting Room Right-Click Options

Right-click Option	Description
New Participant	Adds a new participant to the Meeting Room. For details, see Chapter 6, "Adding New Participants to a Conference" on page 6-42.
Copy Meeting Room	Copies the Meeting Room properties to a template, another MCU or the same MCU under a different name.

Table 7-4: Meeting Room Right-Click Options (Continued)

Right-click Option	Description
Paste Participant	Pastes participant properties from the clipboard into a Meeting Room. For details, see Chapter 6, “To copy the participant properties from an On Going Conference or Reservation:” on page 6-46.
Paste Participant As	Pastes participant properties from the clipboard into the Meeting Room while changing the participant name or other parameters. For details, see Chapter 6, “To copy the participant properties from an On Going Conference or Reservation:” on page 6-46.
Delete	Deletes the Meeting Room from the MCU.
Print Meeting Room	Prints the Meeting Room information to a printer, to a file, or copies the data to the clipboard. For details, see Chapter 6, “Printing Conference Data” on page 6-68.
Properties	Modifies the Meeting Room properties. For details, see *Chapter 4, ”Defining a New On Going Video Conference” on page 4-20*.

8

Entry Queues, Operator Conferences, and Attended Conferencing

Entry Queues and Entry Queue Services

An Entry Queue (EQ) is a special routing lobby to which one or several dial-in numbers are assigned for both video and audio endpoints, including PSTN, VoIP, H.320, H.323, SIP and T1-CAS endpoints. Participants with the same capabilities (audio only or video line rate, video protocol, video format, etc.) dial the same dial-in number and they are routed to the appropriate conference according to the conference numeric ID or the conference password they enter (depending on the MCU configuration).

An Entry Queue Service must be assigned to the Entry Queue to enable the voice prompts guiding the participants through the connection process. For video Entry Queues, the Entry Queue Service can include a video slide that is displayed to the participants while staying in the Entry Queue (during their connection process).

The Entry Queue remains in a passive state when there are no callers in the queue (in between connections) and is automatically activated once a caller dials its dial-in number.

Ad Hoc-enabled Entry Queue

An On Going Conference is initiated from an Entry Queue that is configured to support Ad Hoc (reservation-less) conferencing. The conference is created according to the Profile assigned to the Ad Hoc-enabled Entry Queue.

For a detailed description of this feature, refer to the *MGC Manager User's Guide Volume II, Chapter 3, "Ad-Hoc Conferencing and External Database Authentication"*.

Attended and Unattended Conferences and Entry Queues

Conferences can be attended or unattended. In unattended mode, connection to the conference is automatic and the whole conference can be run without operator intervention. In attended mode, the operator connects participants to the conference, and actively manages the conference. Conferences are set as attended when assigning an IVR Service set to attended mode.

Entry Queues can also be attended or unattended. For conferences accessed by an Entry Queue, the attended or unattended mode of the Entry Queue determines the connection mode of the conference. In an unattended Entry Queue, the routing to the destination conference is automatic. In attended Entry Queues, routing to the destination conference is done by the operator and requires the presence of an Operator conference.

- The initial setting of an Entry Queue or conference as unattended or attended is done in the Entry Queue Service or IVR Service, by selecting or clearing the “On-hold for Operator Assistance” option in the *Welcome Message* dialog box. When selected, callers have to wait for the operator’s assistance in order to connect to the conference. If this check box is cleared, the connection process is automatic. For a detailed description of the Entry Queue or IVR Service definition, see the *MGC Manager User’s Guide, Volume II, Chapter 2, “IVR and Entry Queue Services”*.
- Unattended conferences can also be created using SIP factories. For more information see the *MGC Manager User’s Guide, Volume II, Chapter 3, “SIP Factories”*.

When an Entry Queue or conference is unattended, the participants are guided to the conference using menu-driven scripts that are part of the Entry Queue Service or IVR Service. DTMF codes entered using the telephone touch-tone keypad or the endpoint’s DTMF input device, usually a remote control, are the callers input to voice prompts. The operator is not involved in the connection process unless the participant fails to enter the destination conference password or numeric ID (depending on the system configuration) and the operator assistance option is enabled in the Entry Queue Service or IVR Service.

With some endpoints (video and IP telephones), the participants can add the conference numeric ID or conference password to the dial-in number to form one string in TCS4 or H.323ID format. Using this string the participant can connect directly to the conference without accessing the Entry Queue first.

Operator Conferences

An Operator conference is a side conference that enables the operator to assist participants without disturbing the On Going Conferences and without being heard by other conference participants. The operator can move a participant from the Entry Queue, conference IVR Queue, Participants Queue, Welcome Queue (Greet and Guide), or On Going Conference to a private, one-on-one conversation in the Operator conference. An Operator conference can have up to two participants only: the operator and a participant. An Operator conference is required to manage attended conferences.

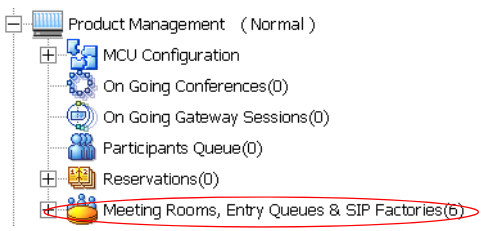
Defining a New Entry Queue

If the destination conference is set to Video Switching, its audio, video, and line rate settings must be identical to the Entry Queue settings, otherwise participants cannot move to the target conference.

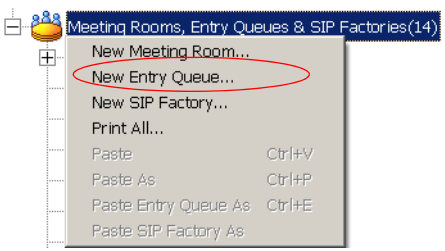
- Entry Queues can only be defined in MCUs containing an Audio+ card.
- If you have not already done so, define the Entry Queue Message Service in the MCU - IVR Services before defining the Entry Queue. For more details, see the *MGC Manager User's Guide, Volume II, Chapter 2, "IVR and Entry Queue Services"*.
- Entry Queues can be encrypted. For more details, see the *MGC Manager User's Guide, Volume II, Chapter 1, "Media Encryption"*.
- The definition of the Audio Only Entry Queue is described in the *MGC Manager User's Guide, VoicePlus Edition, Chapter 5*.

To define a new Video Entry Queue:

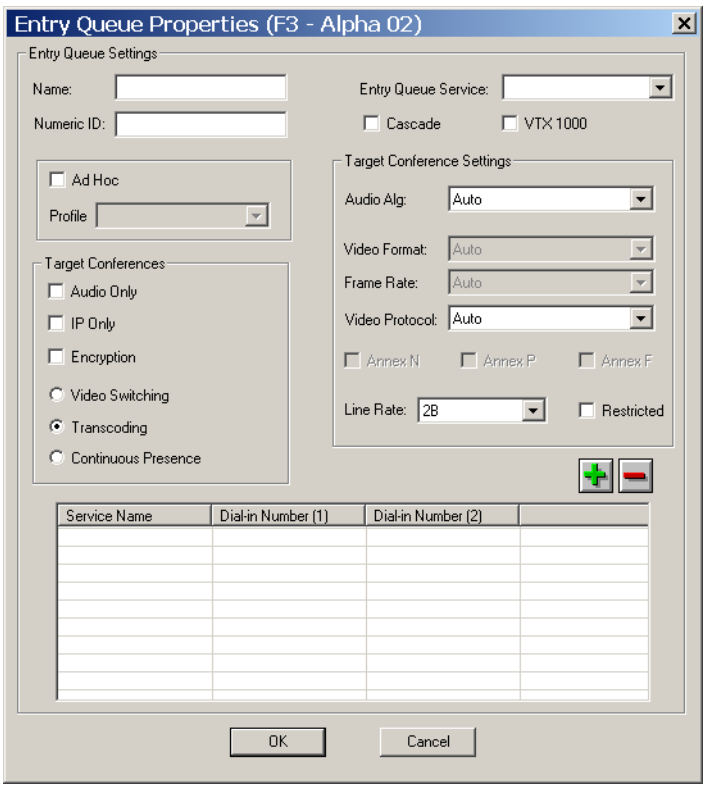
1. Connect to an MCU and expand its tree.



2. Right-click the *Meeting Rooms, Entry Queues and SIP Factories* icon, and then click **New Entry Queue.**



The *Entry Queue Properties* dialog box opens.



3. Define the following parameters:

Table 8-1: Entry Queue Definitions Parameters

Option	Description
Entry Queue Settings	
Name	Enter the name of the Entry Queue using up to 20 characters. If the name is already used by another Entry Queue, Meeting Room, or conference an error message is displayed when completing the Entry Queue definition.

Table 8-1: Entry Queue Definitions Parameters (Continued)

Option	Description
Numeric ID	A Numeric ID is a unique number assigned to the Entry Queue identifying it to the system. It is used as part of the dialing string by IP participants to connect to the Entry Queue. A Numeric ID can be assigned either automatically or manually. To manually assign the Numeric ID, use the number of digits defined in the appropriate flag in the "system.cfg" file. If the Numeric ID is already in use in another Entry Queue or conference, an error message is displayed. If you do not manually assign the Numeric ID, the MCU assigns one after the completion of the Entry Queue definition. The assignment is done once, when the Entry Queue is saved on the MCU. **Note:** If the MCU is configured to support only *automatic* assignment of Numeric Conference IDs, this field is disabled and the system automatically assigns a Numeric ID after you save the Entry Queue on the MCU.
Entry Queue Service	Select the name of the Entry Queue Service for playing audio prompts and displaying the video slide to participants waiting in the Entry Queue. Leave this field blank to use the default Entry Queue Service (if an Entry Queue Service was set as default). **Note:** • The same Entry Queue Service can be used for Audio Only and Video participants
Cascade	Select this check box to define an Auto Cascade Entry Queue. Defining an Auto Cascade Entry Queue is part of the setup process to enable automatic cascading of Ad Hoc conferences. For details see the *MGC Manager User's Guide, Volume II, Chapter 3, "Ad Hoc Auto Cascading"*.

Table 8-1: Entry Queue Definitions Parameters (Continued)

Option	Description
VTX 1000	Select this check box to create a VTX 1000 enabled Entry Queue. Participants connecting to VTX 1000 enabled Entry Queues are initially assigned wide band resources. If the endpoint is not identified as VTX, the wide band resources are subsequently released.
Ad Hoc	Select this check box to enable Ad Hoc conferencing. When an Ad Hoc conference needs to be created, the Target Conference properties are taken from the Profile assigned to the Entry Queue. For more details, see the MGC Manager User's Guide, Volume II, Chapter 3, "Ad Hoc Conferencing and External Database Authentication". **Note:** • Profiles must be defined before enabling the Ad Hoc conferencing option. • The Entry Queue can also be used for standard conferencing. In that case, participants can be moved to target conferences with properties identical to the Target Conference Setting Properties defined in the Entry Queue.
Profile	Select the Profile to be used for the definition of the target conference in Ad Hoc conferencing. The Profiles list includes all the profiles currently saved on the MCU. **Note:** Profiles must be defined before enabling the Ad Hoc conferencing option.
Target Conferences	
Audio Only	Select this check box to create an Audio Only Entry Queue whose target conferences are Audio Only conferences. Select this option if your MCU has only VoicePlus capabilities. **Note:** Audio Only participants can also connect via a video Entry Queue.

Table 8-1: Entry Queue Definitions Parameters (Continued)

Option	Description
IP Only	Select this check box to create an IP Only Entry Queue, whose target conferences are IP Only conferences. The target conferences can be set as VoIP conferences (Audio Only, IP Only) or Software Continuous Presence (video). For a detailed description of SWCP, see the MGC Manager User's Guide, Volume II, Chapter 1, "Software Continuous Presence Settings".
Encryption	Select this check box to encrypt this Entry Queue. When enabled, only encrypted participants can join this Entry Queue, while non-encrypted participants are disconnected from the MCU. For more details about encryption and encrypted Entry Queues, see the *MGC Manager User's Guide, Volume II, Chapter 1, "Media Encryption"*.
Video Switching	Select this option to set the Entry Queue as a Video Switching Entry Queue, and save video resources (as no video ports are used for participant connections). The participants connect to this Entry Queue using the line rate and video settings of the Entry Queue. Therefore, to move from the Entry Queue to a destination Video Switching conference, the destination conference line rate and video settings must be identical to the Entry Queue settings, otherwise the endpoint will experience connection failure. If the participants are moved from a Video Switching Entry Queue to *Transcoding* or *Continuous Presence* conference, they retain the video settings of the Entry Queue, hence not using the endpoint's best capabilities. To use the endpoint's highest capabilities, set a different Video Switching Entry Queue for each combination of line rate and video settings used by most endpoints, or define a Transcoding or Continuous Presence Entry Queue (using video resources).

Table 8-1: Entry Queue Definitions Parameters (Continued)

Option	Description
Transcoding/ Continuous Presence	Select this option to define a Transcoding/ Continuous Presence Entry Queue. When participants connect to this Entry Queue, they use the MCU's video resources. Participants connecting to this Entry Queue maintain their highest capabilities when moved to a *Transcoding* or *Continuous Presence* conference. If the target conference is a *Video Switching* conference, the audio, video, and line rates of the Entry Queue and the target conference must match or the endpoints will not be able to connect to the target conference.
Target Conference Settings	
Audio Alg.	Select the audio algorithm for the Entry Queue. If target conferences are Audio Only conferences, select G.711. If IP Only, you have an additional option G.723/G.729. If set to **Auto** the system tries to connect the participants using the best possible audio algorithm, selecting it in the following order: G.728, G.722, G.711.
Video Format	Select the Video Format for the Entry Queue according to the target conference settings. The Video Format options are enabled only when defining a Video Switching Entry Queue and when the video protocol is H.261 or H.263. Select **Auto** to let the system select the appropriate video format according to the participant properties. Select one of the video formats to force the participant to connect using one of these frame resolutions. For a detailed description of the Video Format options, see *Chapter 4, "Video Format" on page 4-44.*

Table 8-1: Entry Queue Definitions Parameters (Continued)

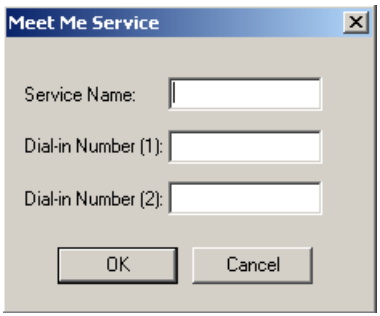
Option	Description
Frame Rate	Select the Frame Rate for the Entry Queue according to the target conference settings. This option is enabled only for Video Switching conferences set to H.261, H.263, or H.264. Select **Auto** to let the system select the appropriate frame rate. Select one of the frame rates to force the participant to connect using this frame rate. For a detailed description of the frame rates values, see *Chapter 4, "Frame Rate" on page 4-45.*
Video Protocol	Select the video compression protocol of the Entry Queue according to the target conference settings. **Auto** - select this option to let the system automatically select the appropriate compression method for connecting the participant to the target conference. For a detailed description of the Video Protocol options, see *Chapter 4, "Video Protocol (cont.)" on page 4-44*.
Annexes	Annexes are additions to the *Video Format* when using the H.263 Video Protocol, increasing the quality of the video display. Select the Annexes for the Entry Queue if these annexes are used in target conferences. Annexes **N**, **P** and **F** are enabled only when defining a Video Switching Entry Queue and the Video Protocol is set to H.263. For more details on Annexes, see *Chapter 4, "Annexes (cont.)" on page 4-47.*
Line Rate	Select the maximum line rate at which the endpoint will connect to the Entry Queue and the target conference. For a Video Switching Entry Queue, select the highest line rate common to all participants. For Transcoding and Continuous Presence Entry Queues, set the line rate to the highest line rate that can be used by the participants in the conference.

Table 8-1: Entry Queue Definitions Parameters (Continued)

Option	Description
Line Rate (cont.)	If the target conference is Video Switching, the Entry Queue line rate must be the line rate that is set for the target conference to enable the participant to move from the Entry Queue to the target conference.
Restricted	Select this option to enable participants using Restricted lines (the Line Rate for each channel is 56 Kbps instead of 64 Kbps) to connect to the Entry Queue and be moved to a Video Switching conference set as Restricted lines.
Network Services Table	The Network Services table displays the list of ISDN/ PSTN dial-in numbers assigned to the Entry Queue.

Dial-in numbers are relevant to ISDN participants only.
IP participants use a dialing string composed of the H.323 Network Service Prefix and the Entry Queue Numeric ID. H.323 participants can dial in to an Entry Queue by dialing the IP Network Service Prefix and the Numeric ID of the Entry Queue using the following format: [(Prefix) (Entry Queue Numeric ID)].
For more information, see "Enabling Entry Queue Access for Conferences" on page 8-17.

4. Click the **Plus** button to assign dial-in numbers to the Entry Queue. The *Meet Me Service* dialog box opens.



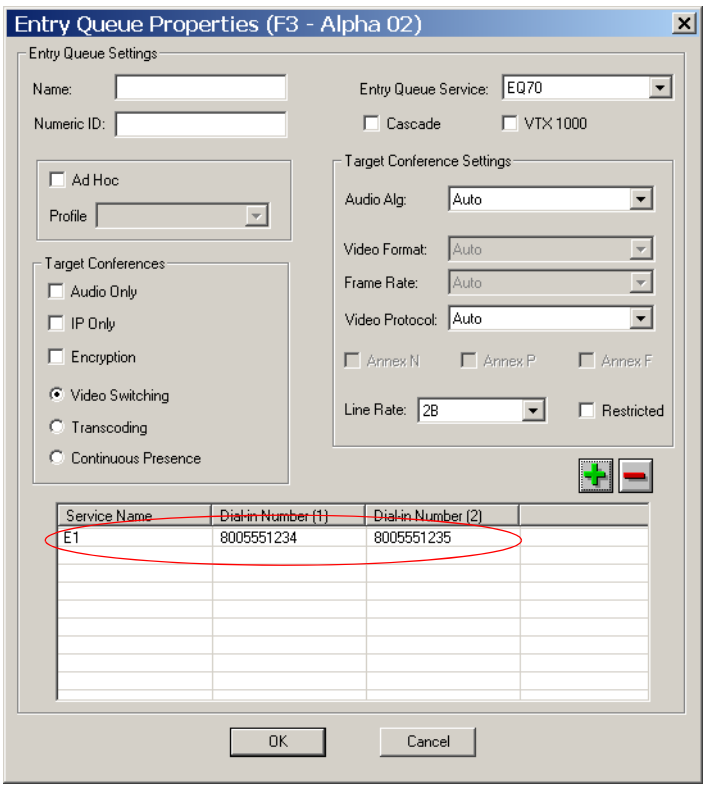
5. Define the ISDN dial-in numbers assigned to the Entry Queue.

Table 8-2: Dial-in Numbers Table

Option	Description
Service Name	Type the name of the ISDN Network Service to be used by participants to connect to the Entry Queue exactly as it is defined in the ISDN Network Services list (the system is case sensitive).
Dial-in number (1)	Enter the first dial-in number to be assigned to the Entry Queue. This number must be part of the dial-in numbers range defined for the selected ISDN Network Service. For more details regarding the dial-in numbers range, see the MGC Administrator's Guide, Chapter 3. **Note:** When connecting ISDN lines via a private PBX to the MCU, the PBX may truncate the dial-in number. The operator must know the digits which are truncated by the PBX and convey them to the participant.
Dial-in number (2)	Type the second dial-in number to be assigned to the Entry Queue. This number is optional.

6. Click **OK**.

The dial-in numbers are added to the Network Services Table.



7. Repeat the steps 4 to 6 to define additional dial-in numbers for the Entry Queue. Up to 16 numbers may be assigned to the Entry Queue.

To delete a dial-in number from the Entry Queue:

1. Select the service name or dial-in number to delete in the *Entry Queue Properties* dialog box.

2. Click the **Minus** button.
   The service name and phone numbers are deleted.

If no Dial-in numbers are manually assigned by the operator, the MCU automatically allocates the dial-in numbers from the dial-in numbers range defined in the default ISDN Network Service.

3. Click **OK** to complete the Entry Queue definition.
   The new Entry Queue is added to the *Meeting Rooms, Entry Queues & SIP Factories* list.

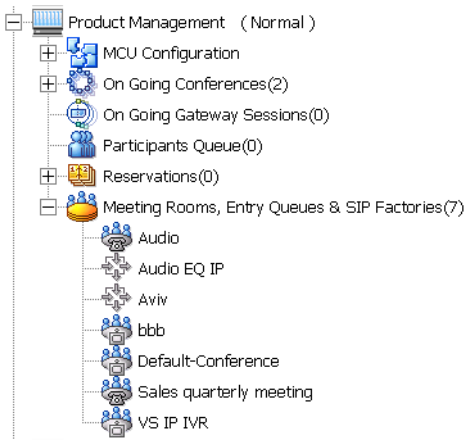
Listing Entry Queues

All Entry Queues are listed in the *Meeting Rooms, Entry Queues & SIP Factories* list. To save dial-in numbers, usually a limited number of Entry Queues are defined per MCU.

To view the list of Entry Queues:

1. In the *Browser* pane of the main window, expand the *MCU* tree.
2. Expand the *Meeting Rooms, Entry Queues & SIP Factories* tree.

   A list of Entry Queues, Meeting Rooms and SIP factories is displayed below the *Meeting Rooms, Entry Queues &SIP Factories* icon.

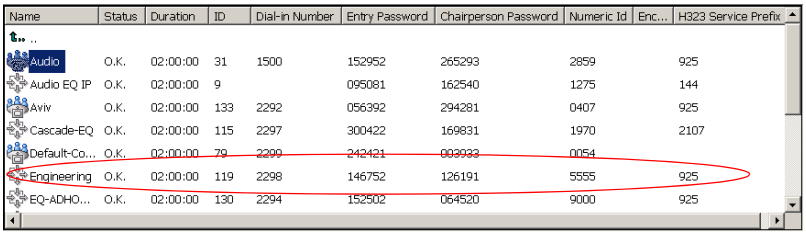


   The number of Meeting Rooms, Entry Queues and SIP Factories currently defined for the selected MCU is displayed between parenthesis next to the *Meeting Rooms, Entry Queues &SIP Factories* icon. Each Entry Queue is identified by a name and icon .

   You can also view the list of Meeting Rooms, Entry Queues and SIP Factories in the *Status* pane. This enables you to easily retrieve the dial-in numbers assigned to the Entry Queue and is especially useful when the dial-in numbers were automatically allocated by the system.

3. To view the list of Entry Queues in the *Status* pane, click the *Meeting Rooms, Entry Queues & SIP Factories* icon.

   The list of Entry Queues, Meeting Rooms and SIP Factories is displayed in the *Status* pane.



Name	Status	Duration	ID	Dial-in Number	Entry Password	Chairperson Password	Numeric Id	Enc...	H323 Service Prefix
..									
Audio	O.K.	02:00:00	31	1500	152952	265293	2859		925
Audio EQ IP	O.K.	02:00:00	9		095081	162540	1275		144
Aviv	O.K.	02:00:00	133	2292	056392	294281	0407		925
Cascade-EQ	O.K.	02:00:00	115	2297	300422	169831	1970		2107
Default-Co...	O.K.	02:00:00	79	2299	242421	003033	0054		
Engineering	O.K.	02:00:00	119	2298	146752	126191	5555		925
EQ-ADHO...	O.K.	02:00:00	130	2294	152502	064520	9000		925

   The dial-in number allocated to the Entry Queue is listed in the *Dial-in Number* column. This is the number that should be used by all ISDN/PSTN callers connecting to conferences which are accessed from the Entry Queue. If more than one Entry Queue is defined (for example, when the audio messages and prompts are played in different languages or for different video settings), the dial-in number determines which Entry Queue is used to access the conference.

   In addition, the H.323 Service Prefix is displayed, as well as the Entry Queue numeric ID. Using these two numbers, you can compose the dialing string for H.323 endpoints. In the example shown here, the Entry Queue named Engineering is assigned the numeric ID 5555, and the Service Prefix is 925, hence, the dialing string from H.323 endpoints is 92555555.

   Although the list displays a conference password and a chairperson password, they are not relevant to the Entry Queue, only to the Meeting Rooms that are displayed in the same list.

Setting an Entry Queue as Default

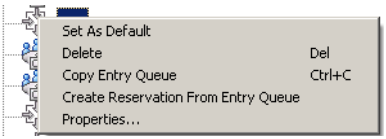
You can designate an Entry Queue as default to enable participants to be automatically routed to the default Entry Queue when there is a problem with the dialed string when dialing one of the following:

- Network Service Prefix##NID, when the numeric ID is incorrect
- Network Service Prefix##NID##Password, when the numeric ID is incorrect
- Network Service Prefix
- IP card address##NID, when the numeric ID is incorrect
- IP card address##NID##Password, when the numeric ID is incorrect
- IP card address

The default Entry Queue is defined for the MCU, regardless of the dialed IP card. The default Entry Queue can be deleted from the MCU.

To set an Entry Queue as default:

- In the Meeting Rooms and Entry Queues list, right-click the Entry Queue and select **Set as Default**.



The default Entry Queue is identified by a bold name.

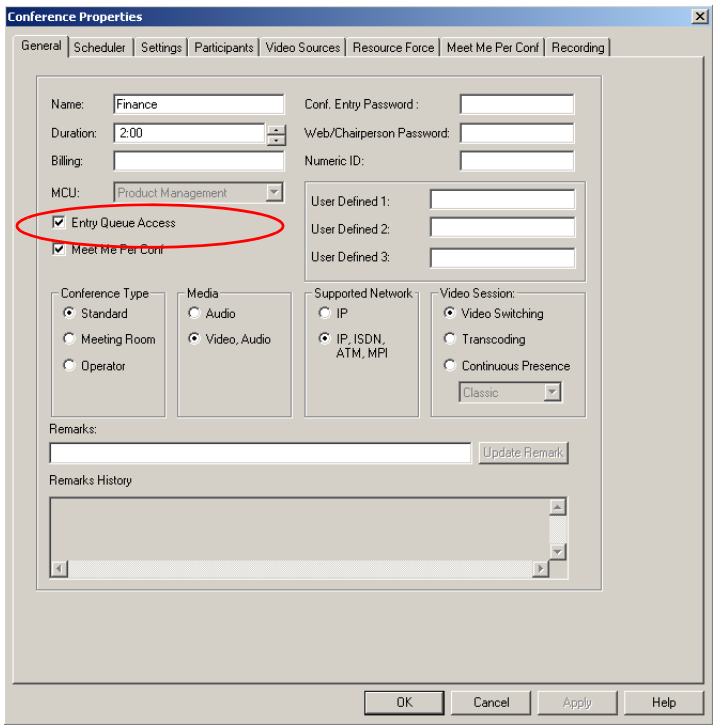
If several IP boards are associated with the IP Service in which *Forwarding* is checked in the H.323 Settings, then an incoming call that will reach a fully loaded IP board will be forwarded to the next IP board.

Enabling Entry Queue Access for Conferences

On Going Conferences are accessed from an Entry Queue if the Entry Queue Access option is selected during the conference definition in the *Conference Properties - General* dialog box.

To enable an Entry Queue Access conference during the conference definition:

In the *Conference Properties - General* dialog box, select the **Entry Queue Access** check box.



The routing from the Entry Queue to the conference is done either according to the conference numeric ID or the conference password, depending on the system configuration. According to the selected routing method, you must assign this conference a numeric ID and/or conference password.

If the routing method is password, define a conference and chairperson password or leave it blank, and the MGC Manager will allocate a password automatically.

Even if the routing method is according to conference password, a numeric ID is assigned to the conference. If you leave the Numeric ID field blank, the MGC Manager will automatically allocate a Numeric ID. The Numeric ID length is defined in the “system.cfg”.

If no IVR is assigned to the conference or the assigned IVR Service is not configured to prompt for conference Entry Password, you do not need to define one.

The Web or Chairperson Password can be assigned to the conference if the conference is monitored from the WebCommander application or if an IVR Service is assigned to the conference and you want to enable the chairperson functionality.

Using an Existing Entry Queue to Define a Target Conference

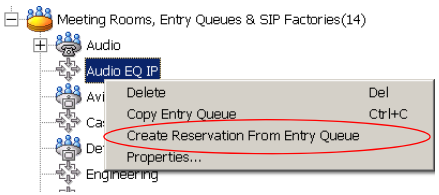
You can define a new On Going Conference, Reservation, or Meeting Room Conference using an existing Entry Queue, ensuring that the target conference will have the same properties as the Entry Queue. This results in a smooth connection between the Entry Queue and target conference.

To define a new On Going Conference, Reservation, or Meeting Room Conference using an existing Entry Queue:

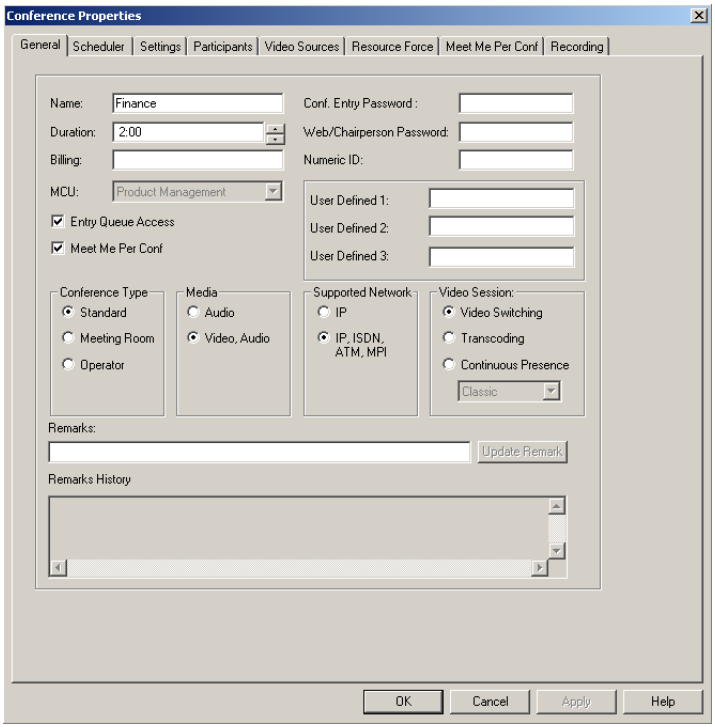
1. Expand the *Meeting Rooms, Entry Queues & SIP Factories* tree.

   A list of Entry Queues, Meeting Rooms and SIP Factories is displayed below the *Meeting Rooms, Entry Queues & SIP Factories* icon.

2. Right-click the *Entry Queue* icon to be used for creating the new target conference, then click **Create Reservation From Entry Queue**.



The *Conference Properties - General* dialog box opens.



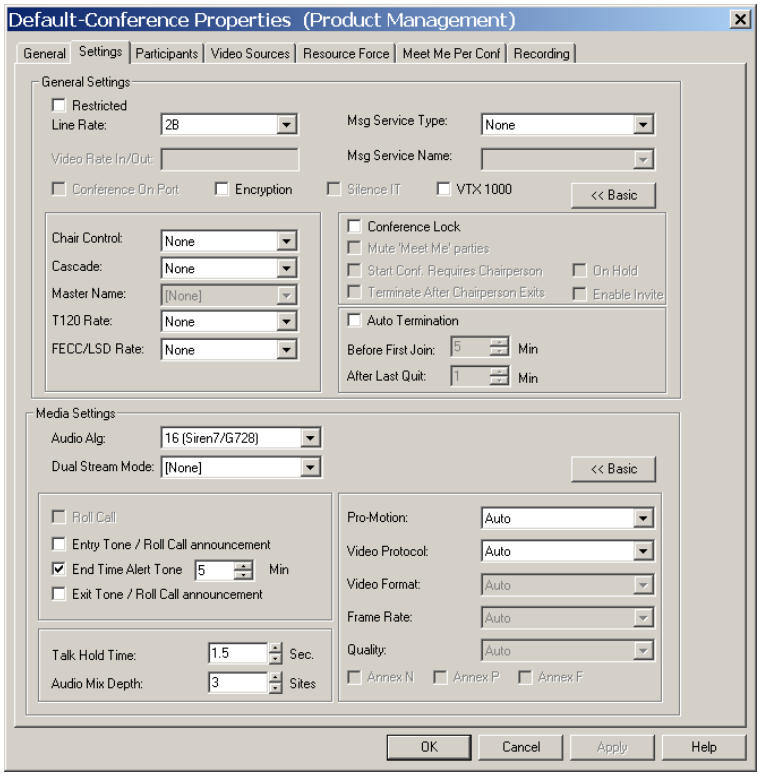
The conference name is derived from the Entry Queue name and the conference properties are taken from the Entry Queue properties. You can modify the conference name by entering a new name.

3. In the *Numeric ID* box enter the conference numeric ID. If left blank, the system automatically assigns a numeric ID (depending on the "system.cfg" settings).
4. If required, define the Conference Entry Password and the Chairperson Password. If left blank the system automatically allocates them (if configured in the "system.cfg" settings). These passwords are required if an IVR service is assigned to the conference and is configured to prompt for them. Otherwise, you can leave these parameters blank.
5. If required, enter general information in the *User Defined* fields. For more details see *Chapter 4, "User Defined 1-3" on page 4-24.*

6. Click the **Scheduler** tab to define the conference start date and time. For more information, see *Chapter 9, "Rescheduling Reservations" on page 9-11*.

The current date and time are shown in the Scheduler dialog box. Do not change them if you want to start an On Going Conference.

7. Click the **Settings** tab.
   The *Conference Properties - Settings* dialog box opens.



The dialog box displays the conference properties as defined for the Entry Queue.

You can modify the current line rate and video settings if required, although it is not recommended, as the conference will not be compatible with the Entry Queue.

Select the IVR Service for the conference. If no IVR Service is selected, participants access the conference directly from the Entry Queue without password prompting, and the chairperson functionality is disabled for the conference.

8. Complete the conference definition and click **OK**.

Operator Conferences

In attended conferences, participants accessing the Entry Queue or the conference IVR queue are moved to the Participants Queue where they wait for the operator to assist them. The operator then moves the participants from the Participants Queue to the destination conference. During an On Going Conference the operator can take part in the conference and perform various operations, such as conduct a voting session, manage a Question-and-Answer session, and place participants on hold.

An active Operator conference is required to assist participants during an attended conference.

A chairperson using DTMF codes or the WebCommander application can perform some conference management tasks in an unattended conference where no operator is required. These functions are described in Chapter 6, “Operations Performed During On Going Conferences”. However, a chairperson cannot assist or manage participants.

Operator Functions Requiring an Active Operator Conference

On Going Attended Conferences require an active Operator conference to run on the same MCU as the attended conference. The attended mode is usually defined in the Entry Queue Service or the IVR Service as “On-hold for Operator Assistance”. In attended conferences, the MGC Manager operator is usually responsible for connecting participants to their destination conferences, placing participants on hold, and tending to participants in need of operator assistance. The Participants Queue management tools allow easy management of participants waiting in the queue.

All participants in the Entry Queue, Attended and On Hold stages and those who have requested or need the operator’s assistance appear in the Participants Queue. You can view the participants' statuses either by expanding the Participants Queue tree or by clicking the **Participants Queue Window** button. For more information regarding the *Participants Queue* window, see *“The Participant’s Queue Window” on page 8-33*.

The system simultaneously lists the participants of all the On Going Conferences waiting in the Participants Queue. Only one participant at a time can be moved to the Operator conference for assistance.

When participants require or request operator assistance, or while the operator attends a participant, the participant's icon changes and it appears with a special exclamation point in the *Name* column.

In addition, a special icon is displayed in the *Status* column of the *Monitor* and *Status* panes, indicating the status of the participant (Wait for Assistance, Attended, or Hold).

A participant can request help using the appropriate DTMF code from his/her touch tone telephone or the endpoint's DTMF input device. The participant can request Private assistance (default DTMF code ***0**) or Conference assistance (default DTMF code **00**).

Participants waiting in the Participants Queue or conference for assistance are moved to the Operator conference for a one-on-one conversation with the operator.

For more information regarding the Participant Status icons, see *Chapter 5, "Additional Participant Statuses" on page 5-21*.

In attended mode, the MGC Manager operator can perform one of the following actions:

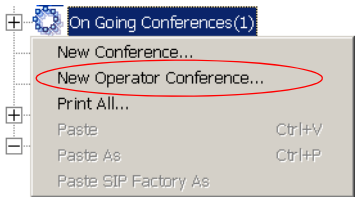
- Once the participant connects to the Entry Queue or conference IVR Queue, he/she enters the Participants Queue, where he/she is moved by the operator to the Operator conference for assistance.
- After a short conversation with the operator, the operator can move the participant to the appropriate conference (Home conference), or place him/her on hold to wait until other participants in the conference are assisted.
- The operator can connect participants belonging to the same destination conference to their conference simultaneously by selecting the appropriate participants and moving them to the Home conference (interactively or using the right-click menu).
- The operator can move a participant from an On Going Conference to the Operator conference for a one-on-one conversation.

Defining an On Going Operator Conference

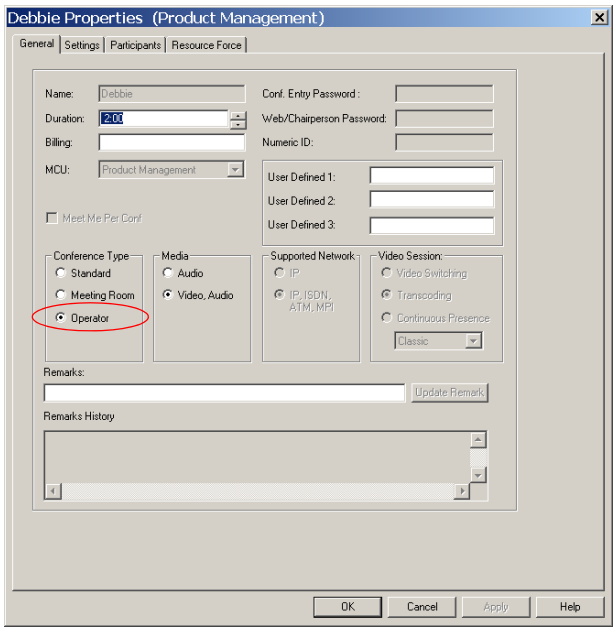
An On Going Operator Conference can be defined directly from the On Going Conferences right-click pop-up menu. In that case, the Operator conference name is derived from the operator name currently connected to the MCU from the same workstation.

To define an Operator Conference:

1. Connect to an MCU and expand its tree.
2. Right-click the *On Going Conferences* icon, and then click **New Operator Conference**.



The *Conference Properties – General* dialog box opens.



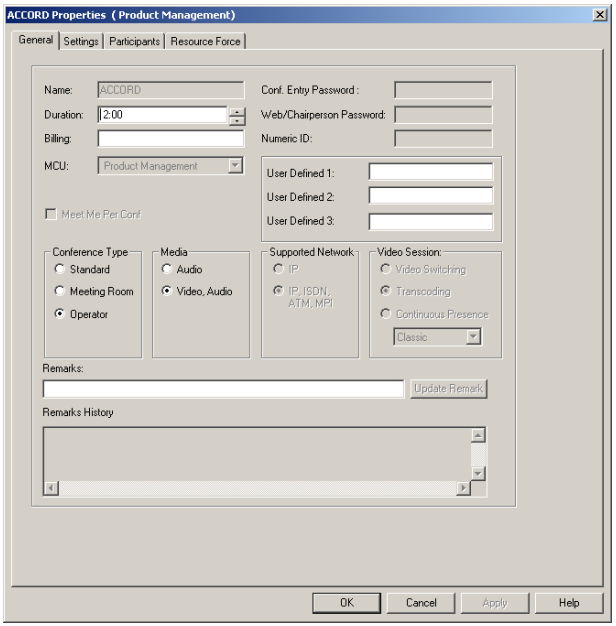
The conference type is set to **Operator**. The name of the On Going Operator Conference or Reservation is taken from the Operator's login name. This name cannot be modified. No password is required.

Only one Operator Conference can be run for each login name at any time.

3. You can modify the conference duration.
4. In the *Media* box, select **Audio** to create an Audio Only Operator conference. This type of conference is described in the MGC Manager User's Guide, VoicePlus Edition. Select **Video, Audio** to create a video Operator conference.

The Operator conference is automatically set to Transcoding, supporting all available network connections. These parameters cannot be modified.

5. Click the **Settings** tab.
   The *Conference Properties – Settings* dialog box opens.



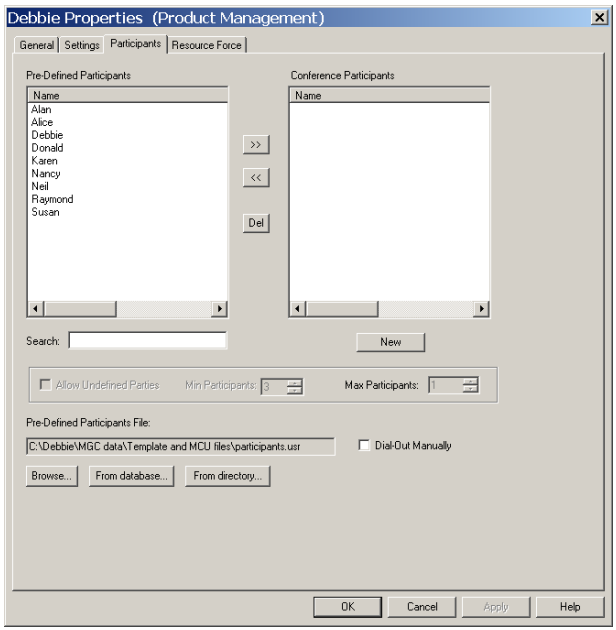
In an Operator conference, all fields not relevant to the operator conference such as, T.120 Rate, Attended, Msg Service Type and Name, Video Format and Frame Rate are disabled.

6. Select the *Encryption* check box to enable encryption at the conference level.

The conference encryption setting is part of the conference reservation and cannot be changed once the conference is running. The participants' encryption options, however, may be changed.

7. Define the remaining parameters as described in *Chapter 4, "Conference Properties - Settings Parameters" on page 4-29.*

8. Click the **Participants** tab.
The *Conference Properties - Participants* dialog box opens.

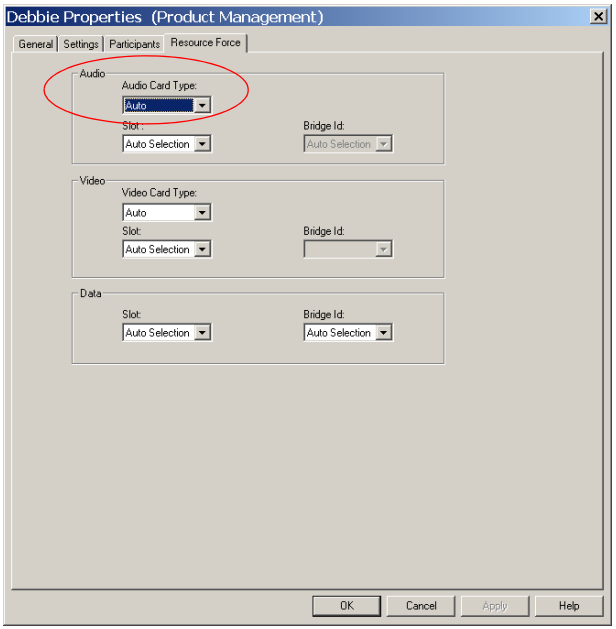


In an Operator Conference, only one participant is defined - the operator. The operator adds the second participant interactively during an On Going Conference.

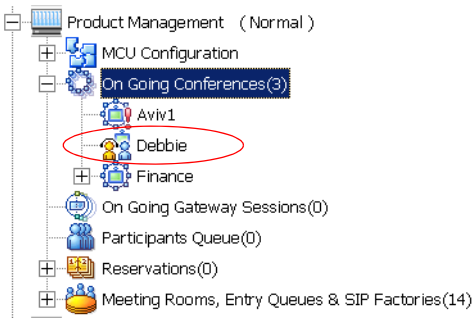
9. Define the operator as a new participant, or if the operator is already defined in a Participant Template file or in the Participant database, add the operator to the conference as described in Chapter 4, "To add participants from the database:" on page 4-52.

10. If required, select the **Resource Force** tab to define the resources to be used in the conference as described on *page 4-63*.

    By default, the Operator conference is scheduled to run on the Standard Audio card. To enable the operator to assist participants in an Entry Queue/IVR Queue or an IVR enabled conference, the operator must run on the Audio+ card. In that case, select the **Advanced** card type in the *Conference Properties - Resource Force* dialog box.



11. Click **OK**. The Operator conference is added to the list of On Going Conferences.



To save this conference for future use, copy the conference to a Group in the Reservations database by selecting the Copy Conf. option from the right-click pop-up menu. For more details, see the MGC Manager User's Guide, Volume II, Chapter 8, "Templates Handling".

The Operator conference is identified by two icons:

- Video Operator conference.

- Audio Only Operator conference.

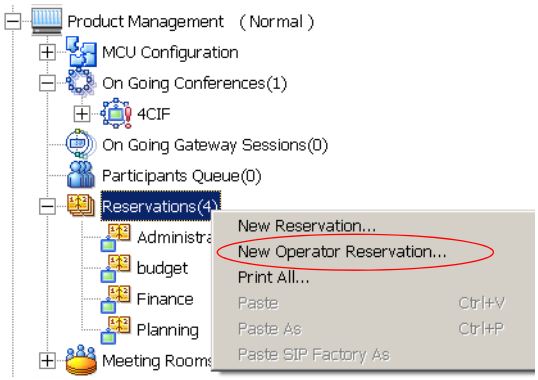
The *Operator* icon is used to identify the operator participating in an Operator conference.

Defining an Operator Reservation

You can define an Operator reservation directly. The definition procedure is similar to the definition of an On Going Operator Conference.

To define a new Operator Reservation:

1. Expand the *MCU* tree.
2. Right-click on the *Reservations* icon, and then click **New Operator Reservation**.



The *Reservation Properties - General* dialog box opens.

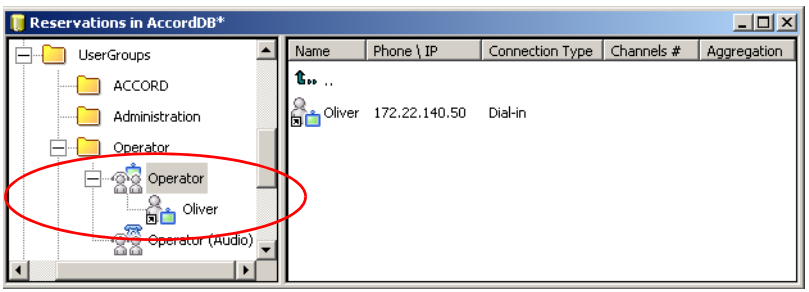
3. Define the conference *Media* and *Duration* as described in the section, *"Defining an On Going Operator Conference" on page 8-24*.
4. Click the **Scheduler** tab.
   The *Conference Properties – Scheduler* dialog box opens.
5. Define the conference *Start Date* and *Time*.
6. Define the remaining parameters as described in *"Defining an On Going Operator Conference" on page 8-24*.

Starting an Operator Conference from a Reservation Template

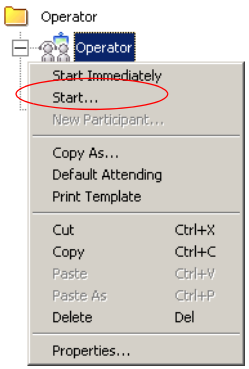
To start an Operator Conference from an Operator Reservation template:

1. Connect to the MCU.
2. Log in to the Database. For more details about Logging into User tables, see the MGC Manager User's Guide, Volume II, Chapter 7, "Logging into the User Tables of the Database".
3. Display the Reservation in the Database window. For more details about Opening a Reservation in the Database window, see the *MGC Manager User's Guide, Volume II, Chapter 7, "Logging into the User Tables of the Database"*.
4. In the Reservations database, click the plus [+] icon next to the *Groups* icon to expand the Groups tree, until you locate the Group containing the Operator Reservation template.

   The Operator Reservation template is listed together with the standard Reservation templates, and is identified by an *Audio* or *Video* *Operator Conference* template icon.
5. To list the participant in the Operator Reservation template, click the plus [+] icon next to the *Operator Reservation* icon.



6. Right-click the *Operator Reservation* icon, and then click **Start Immediately** to start an On Going Operator Conference, or click **Start** to schedule an Operator Conference reservation to start sometime in the future.



If you have selected **Start**, the *Conference Properties - Schedule* dialog box opens.

— Define the conference *Start Date* and *Time* and click **OK**.

The Operator conference is added to either the On Going Conferences or the Reservations list as relevant. The conference name is automatically taken from the operator's login name and not from the Operator Template name.

Attended Conferencing

When participants connect to an Entry Queue or IVR-enabled conference they initially hear a welcome message. If the Entry Queue or IVR-enabled conference is set to attended mode (the Entry Queue service or the IVR service is configured to “wait for Operator Assistance”), they are then moved to the Participant’s Queue where they must wait for an operator to attend to them.

The participants can be in one of the following stages: Greeting (Welcome), Attended, On Hold, or Conferencing. The operator controls the participant connection to the conference moving the participant from one stage to another. The move is performed either interactively using drag-and-drop, using the right-click pop-up menu, or the using appropriate buttons on the Participants Queue toolbar. Special icons are used to indicate the participant status in an attended conference.

Greeting - In the *Greeting* stage, participants connect to the Entry Queue or directly to an IVR-enabled conference. They hear a *Welcome* message, view a *Welcome* video slide, and are then moved to the Participants Queue where they wait for the operator to connect them to the conference.

Attended - In the *Attended* stage, participants are moved to the Operator conference, where after a short conversation with the participant, the operator moves each participant to the appropriate conference (Home conference) or places them on hold.

On Hold - In the *On Hold* stage, participants wait in the Participant’s Queue where they hear background music, view the same *Welcome* video slide, and wait for the operator’s assistance. Participants are also placed on hold and moved to the Participant’s Queue when they enter the wrong conference Numeric ID (while in the Entry Queue) or the wrong password. This option must be enabled in the Entry Queue or the IVR Service and an Operator conference must be running on the MCU.

Conferencing - In the *Conferencing* stage, the participant is already connected to the On Going Conference. During the conference, operator assistance can be requested via DTMF codes, but only if it is already configured in the IVR Service assigned to the conference. For information about configuring IVR Services, refer to the MGC Manager User’s Guide, Volume II, Chapter 2, “IVR and Entry Queue Services”.

The Participant's Queue Window

The Participants Queue window lists all the participants waiting for the operator's assistance. Participants are automatically added to the Participants Queue in the following circumstances:

- The IVR/Entry Queue Service is set to attended mode (On Hold for Operator assistance) and the operator is required to connect the participant to the conference
- The participant fails to connect to the conference by entering the wrong conference Numeric ID or conference password and waits for the operator's assistance
- The participant requests Operator's Assistance during the On Going Conference
- The participant is placed on hold

The Participants Queue provides robust tools for the operator to manage participants waiting for assistance. The Participants Queue is organized in one list. Participants waiting in the Participants Queue can be listed in the *Status* pane, or in a separate window. This enables you to list the On Going Conferences in the *Status* pane while assisting the participants waiting in the Participants Queue.

The Participants Queue management options are available only if an Operator conference is active and running on the MCU.

The main working tool is the *Attended Participant* dialog box that opens when a participant is being attended by the operator. This dialog box enables the operator to enter the participant name, general information, indicate the participant status (VIP yes/no), change the listening or broadcasting volume and move the participant to the destination conference (Home conference). The Attended Participant dialog box also provides tools to easily filter the list of On Going Conferences for the appropriate destination conference, create a new On Going Conference, start an existing Meeting Room, and place a participant on hold. When moving the participant to the destination conference, the next participant waiting in the Participants Queue can be automatically moved to the Operator conference (to the Attended stage) speeding up the operator's work.

Listing Participants in the Participants Queue Window

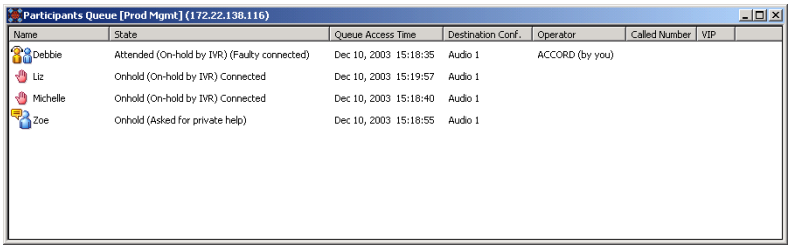
The Participants Queue list contains all the participants who are currently waiting for operator assistance and the participant that is currently being assisted by the operator in the Operator conference.

When starting the MGC Manager for the first time in a new installation or after upgrading to version 6.0 the Participants Queue window is automatically displayed (empty). To bring the window on top, from the window menu, select the Participants Queue window.

To display the Participants Queue window:

- On the *Main* toolbar, click the *Participants Queue Window* icon .

  The *Participants Queue* window opens.



The following participant parameters are displayed in the *Participants Queue* window:

Table 8-3: Participants Queue Parameters

Field/Option	Description
Name	The participant's name and an icon indicating the participant status. Possible statuses are On Hold, Attended, or Wait. For more information about participant statuses, see *Chapter 5, "Additional Participant Statuses" on page 5-21.*
State	The reason the participant is moved to the Participants Queue, and the connection status.
Queue Access Time	The date and time the participant entered the Participants Queue.

Table 8-3: Participants Queue Parameters (Continued)

Field/Option	Description
Destination Conference	The name of the destination conference, when known, or the name of the Entry Queue to which the participant has connected. The conference name is known when the participant was connected to the conference and is moved from the conference to the Participants Queue or the Operator conference. For example, when the participant has requested assistance.
Operator	The login name of the operator who is assisting the participant. This information is useful when there are several operators logged into the same MCU (from different computers).
Called Number	The number the participant has dialed. Usually identifies the dial-in number assigned to the Entry Queue or Meeting Room.
VIP	Indicates whether the participant status is defined as VIP.

The *Participants Queue* window can be moved to any position on screen and you can configure its size as you can do with the MGC Manager Main Window and the Templates window.

The new placement of the window at the time you close the MGC Manager application is saved for the next time you start MGC Manager - it is displayed in the same location.

Using Participants Queue Filters

You can determine the types of participants to be displayed in the Participants Queue window by creating filters that set criteria according to which participants appear/do not appear in the list.

Use this option if you want to view participants connecting to a specific Entry Queue according to the Entry Queue's dial-in number, or to list all the participants of the selected status(es).

Filters may be used in two modes: when you are connected to the database and locally without logging into the database.

When you are connected to the database, filters created and saved in the past may be used for the current session.

If you are not connected to the database, you can only create a filter to be used immediately and locally - without an option to save the filter for future use or add it to the list of filters.

Two types of filters may be defined: personal filters and public filters.

Personal filters are created by all the operators and are for their personal use.

Public filters may only be defined by a database user with permission to create public filters and who has logged into the database.

For more details about defining permissions to create public filters, see the *MGC Manager User's Guide, Volume II, Chapter 6, "Defining Permissions"*.

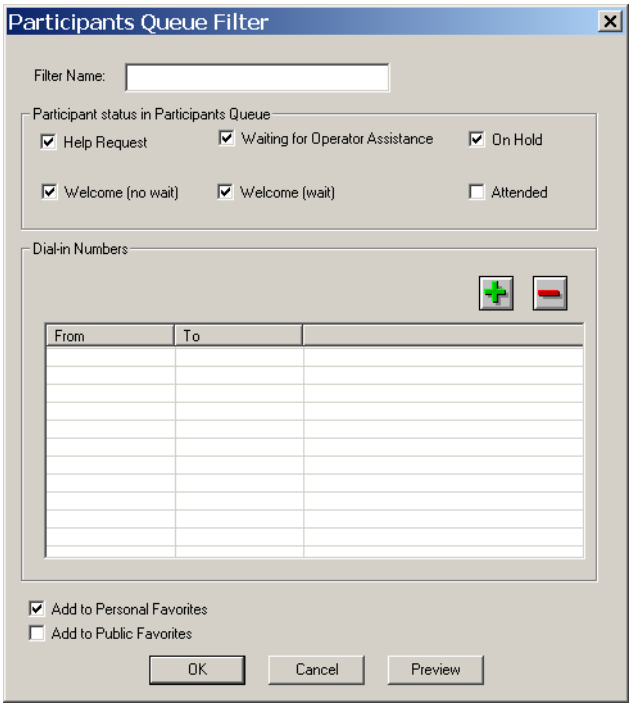
To define Participants Queue filters:

The default *Filter* is **All**; all participants waiting in the Participants Queue appear in the Participants Queue window. You can create a new filter and save it for future use.

1. Log into the database.
2. In the MGC Manager window, from the *Filter* toolbar, in the *Filter* list select **New Filter**.

3. Click the **Participants Queue Filter** button.

The *Participants Queue Filter* dialog box opens.



4. Define the filtering options. You can select the status(es) of participants to be monitored or select to monitor the participants that dialed specified dial-in numbers.

You can define the following filtering parameters:

Table 8-4: Participants Queue Filter Parameters

Field/Option	Description
Filter Name	Enter the name of the filter. If you are modifying the parameters of an existing filter, enter a new name to modify the filter name.
Participant Status in Participants Queue	
Help Request	Select this check box to display participants who have requested help.
Waiting for Operator Assistance	Select this check box to display participants who are waiting for the Operator Assistance because they failed to enter the correct conference numeric ID, Conference or Chairperson password, or because they need to be connected to the conference as the Entry Queue Service or IVR Service is set to attended mode.
On Hold	Select this check box to display participants who have been placed on hold.
Welcome (no wait)	Select this check box to display participants who are in Welcome (no wait) status.
Welcome (wait)	Select this check box to display participants who are in Welcome (wait) status
Attended	Select this check box to display participants who are currently being attended.
Dial-In Numbers	
Dial-In Numbers	Define the dial-in numbers used by participants to access Entry Queues, Meeting Rooms, or conferences. Only participants dialing these numbers are displayed in the *Participants Queue* window.

Table 8-4: Participants Queue Filter Parameters (Continued)

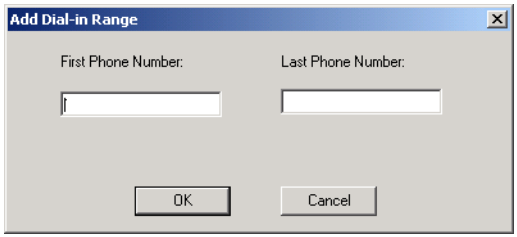
Field/Option	Description
Dial-In Numbers (cont.)	To define the dial-in numbers: 1. Click the plus [+] icon to add a range of dial-in numbers. The *Add Dial-in Range* dialog box opens.  2. In the *First Phone Number* box enter the first dial-in number in the range of numbers to be used for filtering. 3. In the *Last Phone Number* box enter the last dial-in number in the range of numbers to be used for filtering. To use one number, enter the same dial-in number in the *First* and *Last Phone Number* boxes. 4. Click **OK**. The dial-in numbers range appears in the *Participants Queue Filter* dialog box. Repeat steps 1-4 to define additional dial-in number ranges to be filtered. To remove a range of dial-in numbers, select the range to remove and click the minus [-] icon. When no dial-in number ranges are defined in the filter, dial-in number is not used as a criterion for displaying a participant in the *Participants Queue* window.

Table 8-4: Participants Queue Filter Parameters (Continued)

Field/Option	Description
Actions	
Add to Personal Favorites	This check box is selected by default. Select this check box to save the filter for future use and add it to the list of filters that you can use. When viewing the list of Filters in the *Filter* list in the MGC Manager Toolbar, the Filters are labeled **Personal: [Filter Name]**.
Add to Public Favorites	This check box appears only if you have the permission to create/modify Public filters. Select this check box to save this Filter as a Public Filter for use by all users. When viewing the list of Filters in the *Filter* list in the MGC Manager Toolbar, Public Filters are labeled **Public: [Filter Name]**.

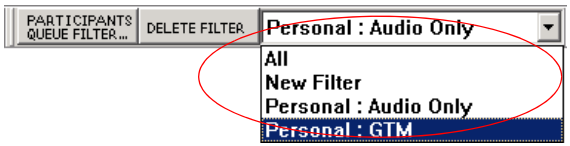
5. Click the **Preview** button to apply the filter to the *Participants Queue* before saving it and adding it to the *Favorites* list.
6. If you are not satisfied with the filtering options, you can modify them and preview the results before saving the filter.
7. Click **OK** to save the filter in the *Favorites* list.

To use filters:

You can filter the list of participants displayed in the *Participants Queue* window at any given time by selecting a different filter from the list of saved filters.

You must be logged into the appropriate databases to use existing, pre-defined filters. For more information on how to log into the database see *Chapter 3, "Using Default Templates to Start a Conference" on page 3-25.*

- To filter the *Participants Queue* window, select a filter from the list.



The *Participants Queue* window displays only the participants that match the selected filter.

To modify a filter:

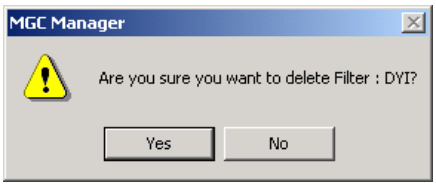
You can modify your personal filters or public filters (if you have the appropriate permission and you are logged into the database).

1. In the *Filters* list, select the filter to modify, and then click the **Participants Queue Filter** button. The *Participants Queue Filter* dialog box opens.
2. Select or deselect any of the filter criteria as needed.
3. Click the **OK** button.

To delete a filter:

You can delete a personal filter or a public filter (if you have the appropriate permission and you are logged into the database).

1. In the *Filters* list, select the filter to delete, and then click the **Delete Filter** button. A confirmation dialog box opens.



2. Click **Yes** to confirm the deletion.
   The filter is removed from the *Filters* list.

The Attended Participants Dialog Box

In attended conferences, all participants connecting to the Entry Queue or directly to an IVR enabled conference are automatically placed in the Participants Queue where they wait for the operator to connect them to the conference.

To connect the participant to the appropriate conference, the operator has to move the participant to the Operator conference (Attend state) so he/she can talk to the participant and find out the name or details of the destination conference. In addition, the operator usually needs to enter the participant's general parameters such as name, E-mail, billing information, and more.

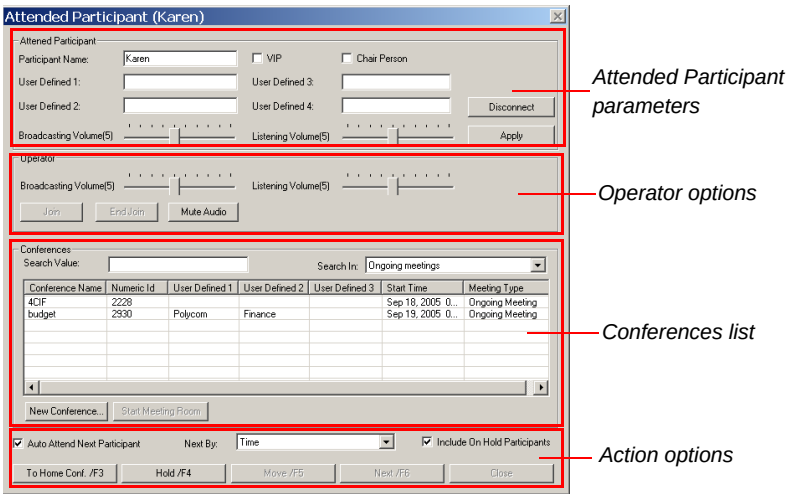
Once the information is entered and the target conference is identified, the participant is moved to that conference, and the operator moves the next participant in line to the Operator conference.

An active Operator conference must run on the same MCU as the Participants Queue to be able to assist Participants waiting in the Participants Queue.

To move a participant to the Operator conference:

- In the *Participants Queue list* (in the *Browser* pane) or *in* the *Participants Queue* window, double-click the icon of the participant you want to move to the Operator conference.

  The participant is automatically moved to the Operator conference and the *Attended Participant* window opens.



In the *Attended Participant* area, enter the participant name, and general information (*User Defined* fields), change the participant status to VIP and/or chairperson, and modify the listening and broadcasting volumes.

In the *Operator* area, you can modify your listening and broadcasting volumes.

In the *Conferences* area, you can list all the On Going Conferences, Meeting Rooms, and Reservations, depending on the selected listing criteria and search the list for the required destination conference.

Once the destination conference is located, you can move the participant to that conference or place the participant on hold.

If the *Auto Attend Next Participant* check box is selected, the next participant waiting in the Participants Queue is automatically moved to the Operator conference when the current attended participant is moved out of the Operator conference (either to the destination conference, placed on hold, or disconnected).

The following parameters and functions are displayed in the *Attended Participants* dialog box:

Table 8-5: Attended Participant Dialog Box Fields

Field/Option	Description
Attended Participant	
Participant Name	If the participant is undefined, the system-assigned participant name is displayed in this field. Type the name of the participant, using up to 80 characters.
VIP	Select this check box to change the participant status to VIP.
Chairperson	Select this check box to designate this participant as the conference Chairperson.
User Defined 1-4 (Title)	In any or all of the four *User Defined* fields, enter general information for the participant, such as the participant's E-mail address, telephone number, company name, location, or any required information. The titles of the *User Defined* fields can be modified in the *Database Manager -> Defaults -> User Defined Defaults* and loaded to the MGC Manager application. For details of defining the titles see the *MGC Manager User's Guide, Volume II, Chapter 6, "Defaults"*. For a description on how to load the user defined default titles, see *Chapter 3, "Loading the User Defined Default Set to the MGC Manager Application" on page 3-31.*

Table 8-5: Attended Participant Dialog Box Fields (Continued)

Field/Option	Description
Broadcasting Volume	If necessary, adjust the level of sound transmitted by this participant, heard by the operator (and later by other participants). To adjust the volume, move the slider. The volume scale is from 1 to 10, where 1 is the weakest and 10 the strongest volume. The volume of each endpoint's audio at connection time is set to 5. One movement of the volume slider increases or decreases the volume by one unit, equivalent to 3db.
Listening Volume	If necessary, adjust the level of sound heard by this participant. To adjust the volume, move the slider. The volume scale is from 1 to 10, where 1 is the weakest and 10 the strongest volume. The volume of each endpoint's audio at connection time is set to 5. One movement of the volume slider increases or decreases the volume by one unit, equivalent to 3db.
Disconnect	Click this button to disconnect the participant from the MCU.
Apply	If you have modified any of the participant volume levels (Broadcasting or Listening), click this button to apply the changes and affect the participant volume. If any of the other participant properties were modified, click this button to update the *Participant Properties - Identification* parameters.
Operator	
Broadcasting Volume	If necessary, adjust the level of sound transmitted by the operator to this participant.
Listening Volume	If necessary, adjust the level of sound heard by the operator.
Join	To join a conference, select the conference in the *Conferences list* and then click this button.

Table 8-5: Attended Participant Dialog Box Fields (Continued)

Field/Option	Description
End Join	Click this button to end the Join operation.
Mute/Unmute Audio	Click this button to mute the operator audio.
Conferences	
Search Value	Enter the first letters of a conference name or the information in one of the *User Defined* fields to determine the conferences to be listed according to the selected *Search In* criteria.
Search In	Select the list that is to be used to search for the destination conference according to the *Search Value*. • ***Ongoing meetings*** - the system searches for the destination conference in the list of On Going Conferences running on the connected MCU. • ***Ongoing meetings + 12h reservations*** - the system searches for the destination conference in the list of On Going Conferences and Reservations scheduled to start in the next 12 hours on the connected MCU. • ***Ongoing + MRs*** - the system searches for the destination conference in the list of On Going Conferences and Meeting Rooms on the connected MCU. • ***All: Ongoing Meetings + 12h + MRs*** - the system searches for the destination conference in the list of On Going Conferences, Meeting Rooms and Reservations scheduled to start in the next 12 hours on the connected MCU.
Conferences List	This table displays the result of the search according to the *Search Value* and *Search In* criteria. To move the participant to the destination conference, select the conference from the list and then click the **Move** button (or use the displayed shortcut key).

Table 8-5: Attended Participant Dialog Box Fields (Continued)

Field/Option	Description
Conferences List (cont.)	**Note:** if the participant's destination conference is known, for example when the participant has requested help, the destination (Home) conference is automatically listed. Click the **To Home Conf** button to move the participant back to his/her original conference.
New Conference	Click this button to create a new On Going Conference and move this participant to it. The *Conference Properties - General* dialog box opens, letting you define the conference parameters.
Start Meeting Room	You can move a participant to a Meeting Room only if the Meeting Room is active. However, the first participant connecting to the Meeting Room cannot be moved from the attended Participants Queue to the Meeting Room unless it is first manually activated. To manually activate a Meeting Room: 1. In the *Search In* list, select an option to list Meeting Rooms. 2. In the *Conferences* list, select the Meeting Room to activate and then click the **Start Meeting Room** button.
Actions	
Auto Attend Next Participant	Select this check box to automatically attend to the next participant in line. When the current attended participant is moved to his/her destination or Home conference, the system automatically moves the next participant in line to the Operator conference. The sequential order of participants in the queue is determined by the *Next By* selection.

Table 8-5: Attended Participant Dialog Box Fields (Continued)

Field/Option	Description
Next By	Determines the sort order of the Participants Queue. When the *Auto Attend Next Participant* is selected, this field determines who is the next participant in line that should be automatically moved to the Operator conference. The list may be sorted according to the following criteria: • ***Time*** - The amount of time participants have been waiting in the *Participants Queue*. This is the default sorting criteria. When a participant is placed on hold, his/her time counter is reset. • ***Name*** - The *Participants Queue* list is sorted by the participant name • ***VIP + Time*** - Participants identified as VIP are listed first (and the VIP list is sorted by time). The remaining (Standard) participants are sorted according to the amount of time they have been waiting in the queue. • ***Requested Help + Time*** - Participants who have requested the operator's assistance are listed first (and the list is sorted by time). The remaining (Standard) participants are sorted according to the amount of time they have been waiting in the queue. • ***VIP + Requested Help + Time*** - Participants identified as VIP are listed first (and the VIP list is sorted by time). Participants that have requested the operator's assistance are listed next. The remaining (Standard) participants are sorted according to the amount of time they have been waiting in the queue.

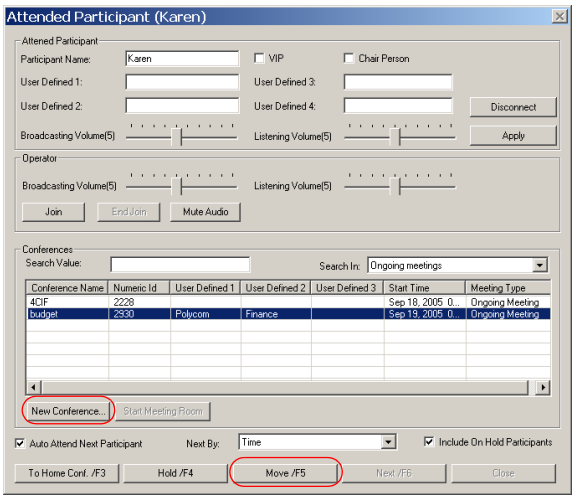
Table 8-5: Attended Participant Dialog Box Fields (Continued)

Field/Option	Description
Include On Hold Participants	Select this check box to include participants placed on hold in the list of participants to which the *Auto Attend Next Participant* option applies. When selected, the participants placed on hold will be attended according to the selected sort order (*Next By*), as all other participants waiting in the queue. When cleared, participants placed on hold will not be automatically moved to the Operator conference for assistance and you have to manually select them in the Participants Queue.
To Home Conf. /F3	Click this button to move the participant to his/her original conference, when the conference is known (without selecting the conference name). The participant's destination conference is known in advance when participant is defined prior to conference start, or when the participant was moved from the conference to the *Participants Queue* for assistance.
Hold /F4	Click this button to place the participant on hold. When placed on hold, the participant hears background music and an icon indicating that the participant is on hold is displayed in the *Status* column of the *Monitor* and *Status* panes. In addition, the participant icon in the *Participants Queue* window changes to On Hold. **Note:** When placing a participant on hold, the waiting time in the queue is reset to zero.
Move /F5	Click this button to move the participant to the selected conference in the *Conferences* list.
Next /F6	This button is disabled when the *Auto Attend Next Participant* option is selected. Click this button to attend the next participant listed in the *Participants Queue* sorted according to the *Next By* criteria.
Close	Click this button to close the dialog box.

- Initially, the command buttons are displayed with the default shortcut keys. If you modify the shortcut key configuration, the command button shortcut key display is updated accordingly.
- You cannot close the *Attended Participant* dialog box when a participant is being attended (and is currently located in the Operator conference). To close this window you must first move the participant from the Operator conference to the destination conference (click the **Move** button) while clearing the *Auto Attend Next Participant* check box.

To connect a participant to his/her destination conference:

- In the *Conferences* area of the *Attended Participant* window, select the destination conference of the attended participant, and then click the **Move** button.

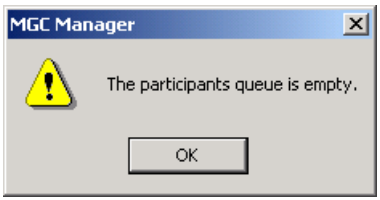


The participant moves to the selected conference.

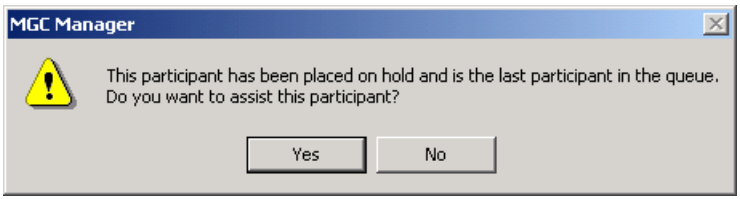
Alternatively, press the selected shortcut key combination as it appears on the **Move** button (the default shortcut key is <**F5**>).

- If the participant's conference is not running, you can click **New Conference** in the *Conferences* area to start a new conference for the participant, then select the conference and click **Move**.
- If the participant's Meeting Room is not active, select the Meeting Room from the list and then click **Start Meeting Room**. Once the Meeting Room is active click **Move**.

- When you move the attended participant to his/her Home/destination conference and he/she is also the last participant in the *Participants Queue,* the following message appears:



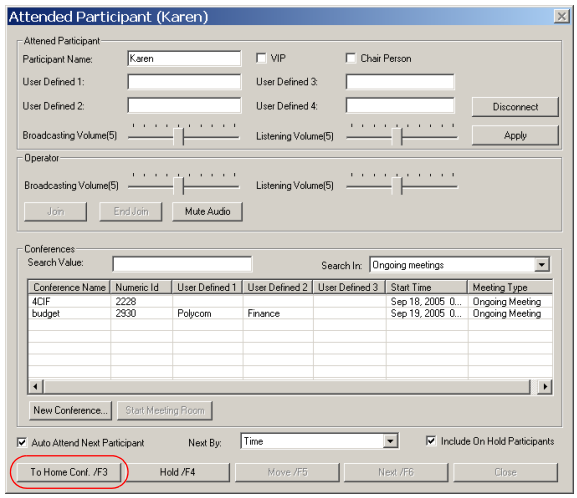
- If the *Participants Queue* includes only On Hold participants the following message is displayed:


MGC Manager
This participant has been placed on hold and is the last participant in the queue.
Do you want to assist this participant?
Yes
No

Click **Yes** to attend a participant that was placed on hold. Click **No** to leave the participant on hold in the *Participants Queue*.

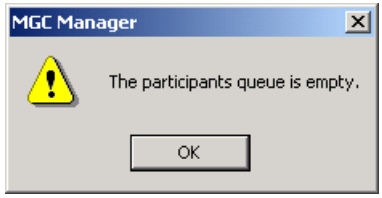
To move a participant to the Home conference:

- In the *Attended Participant* window, click the **To Home Conf.** button.

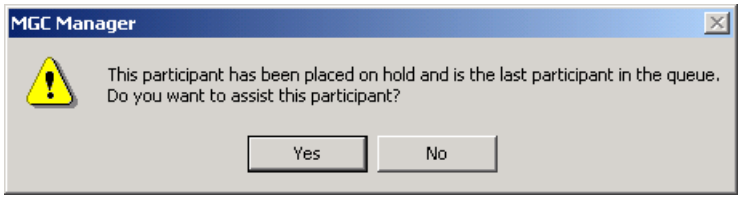


Alternatively, press the selected shortcut key combination as it appears on the **To Home Conf.** button (the default shortcut key is <**F3**>).

- When you move the presently attended participant to his/her Home conference and he/she is the last participant in the *Participants Queue*, the following message appears:



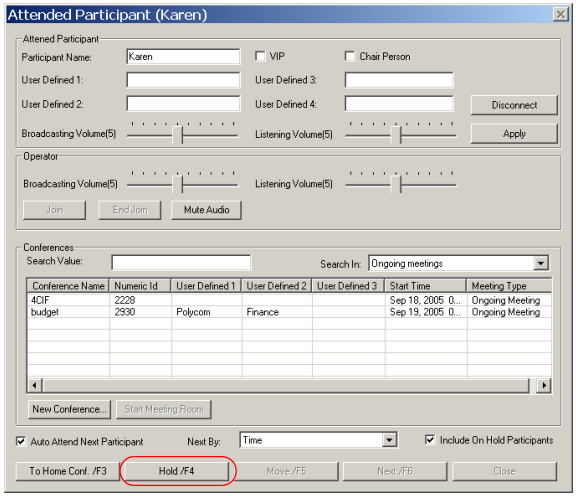
- If the *Participants Queue* includes only On Hold participants the following message is displayed:


MGC Manager
This participant has been placed on hold and is the last participant in the queue.
Do you want to assist this participant?
Yes
No

Click **Yes** to attend a participant that was placed on hold. Click **No** to leave the participant on hold in the *Participants Queue*.

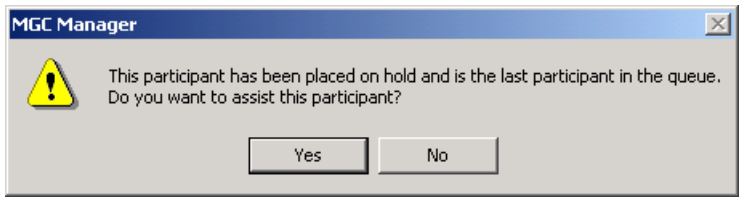
To place a participant On Hold:

- In the *Attended Participant* window, click the **Hold** button.



Alternatively, press the selected shortcut key combination as it appears on the **Hold** button (the default shortcut key is <**F4**>).

- When you place the presently attended participant on hold and he/she is the last participant in the *Participants Queue*, the following message appears:


MGC Manager
This participant has been placed on hold and is the last participant in the queue.
Do you want to assist this participant?
Yes
No

Click **Yes** to attend a participant that was placed on hold. Click **No** to leave the participant on hold in the *Participants Queue*.

Attended Participants Management

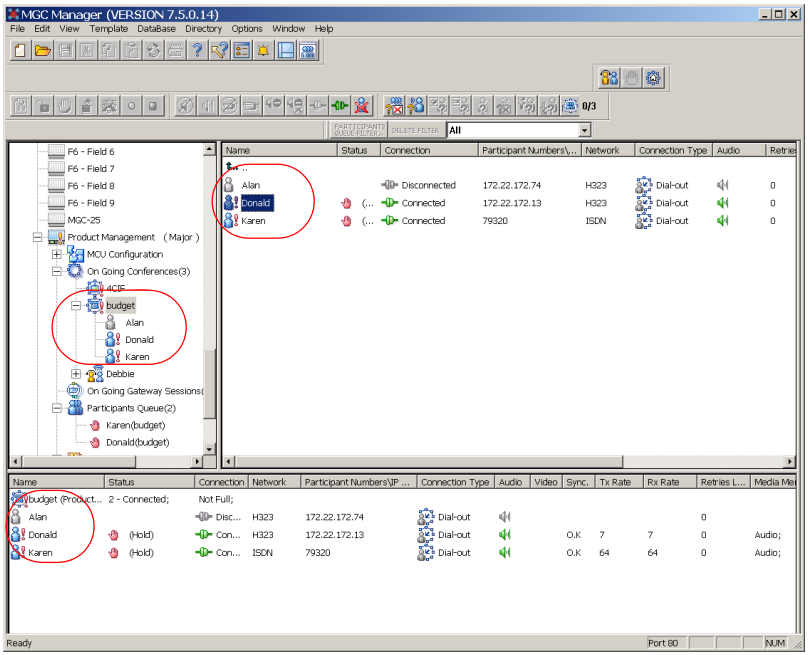
Operators can manage attended participants by performing the following operations:

- Move a participant to an Operator conference (Attend a participant).
- Move a participant to the Home (destination) conference.
- Place a participant on Hold.

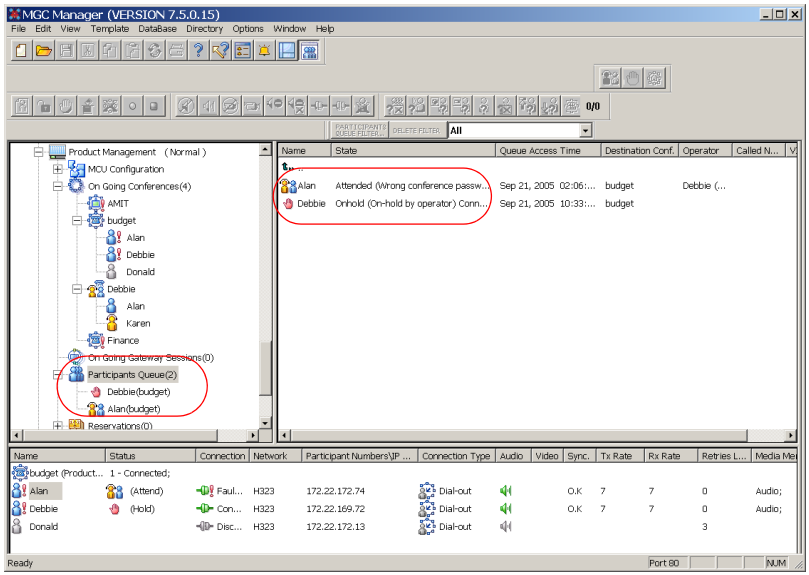
Attended participant operations can be performed in many ways. The participants can be selected from different places, and the operations can be performed using different tools.

The participants can be selected from the following places:

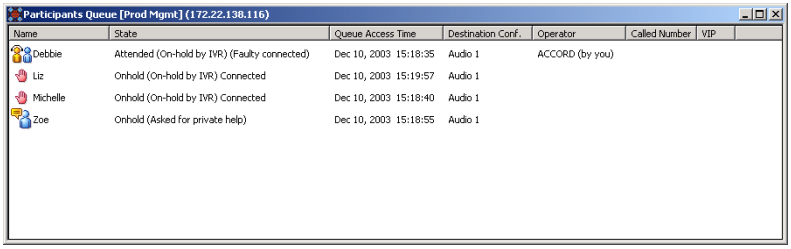
- *Browser*, *Status*, and *Monitor* pane, *On Going Conference* list


MGC Manager (VERSION 7.5.0.14)
File Edit View Template DataBase Directory Options Window Help
Name Status Connection Participant Numbers\... Network Connection Type Audio
Alan Disconnected 172.22.172.74 H323 Dial-out 0
Donald Connected 172.22.172.13 H323 Dial-out 0
Karen Connected 79320 ISDN Dial-out 0
Product Management (Major)
MCU Configuration
On Going Conferences(3)
budget
Alan
Donald
Karen
Debbie
Participants Queue(2)
Karen(budget)
Donald(budget)
Name Status Connection Network Participant Numbers\IP ... Connection Type Audio Video Sync. Tx Rate Rx Rate Retries L... Media Me
budget (Product... 2 - Connected; Not Full;
Alan Disc... H323 172.22.172.74 Dial-out 0
Donald (Hold) Con... H323 172.22.172.13 Dial-out O.K 7 7 0 Audio;
Karen (Hold) Con... ISDN 79320 Dial-out O.K 64 64 0 Audio;
Ready
Port 80
NUM

- *Browser* and *Status* pane, *Participants Queue* list


MGC Manager (VERSION 7.5.0.15)
File Edit View Template DataBase Directory Options Window Help
Product Management (Normal)
MCU Configuration
On Going Conferences(4)
AMIT
budget
Alan
Debbie
Donald
Debbie
Alan
Karen
Finance
On Going Gateway Sessions(0)
Participants Queue(2)
Debbie(budget)
Alan(budget)
Reservations(0)
Name State Queue Access Time Destination Conf. Operator Called N...
Alan Attended (Wrong conference passw... Sep 21, 2005 02:06:... budget Debbie (...
Debbie Onhold (On-hold by operator) Conn... Sep 21, 2005 10:33:... budget
Name Status Connection Network Participant Numbers\IP ... Connection Type Audio Video Sync. Tx Rate Rx Rate Retries L... Media
budget (Product... 1 - Connected;
Alan (Attend) Faul... H323 172.22.172.74 Dial-out O.K 7 7 0 Audio;
Debbie (Hold) Con... H323 172.22.169.72 Dial-out O.K 7 7 0 Audio;
Donald Disc... H323 172.22.172.13 Dial-out 3
Ready
Port 80
NUM

- *Participants Queue* window


Participants Queue [Prod Mgmt] (172.22.138.116)
Name State Queue Access Time Destination Conf. Operator Called Number VIP
Debbie Attended (On-hold by IVR) (Faulty connected) Dec 10, 2003 15:18:35 Audio 1 ACCORD (by you)
Liz Onhold (On-hold by IVR) Connected Dec 10, 2003 15:19:57 Audio 1
Michelle Onhold (On-hold by IVR) Connected Dec 10, 2003 15:18:40 Audio 1
Zoe Onhold (Asked for private help) Dec 10, 2003 15:18:55 Audio 1

The operations can be performed using the following methods:

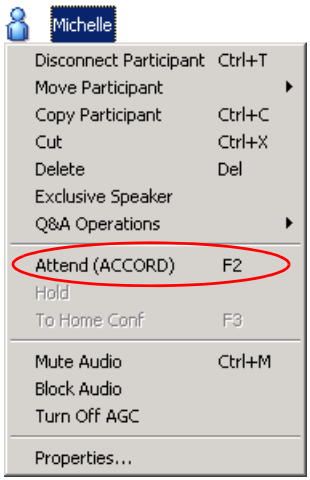
- Using the participant right-click menu
- Using the Participants Queue toolbar
- Using shortcut keys
- Using drag and drop (only applicable to moving a participant to the Operator or Home conference)
- Double-clicking the participant's icon (only applicable to moving a participant to the Operator conference)

Performing Operations using the Right-Click Menu

Moving a Participant to the Operator Conference

To move a participant to the Operator conference from the On Going Conferences list:

1. In the *Browser*, *Status*, or *Monitor* panes, display the list of participants in the On Going Conference.
2. Right-click the icon of the participant to be moved to the Operator conference, and then click **Attend**.

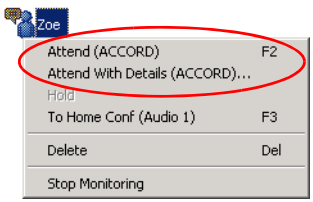


The participant is moved to the Operator conference while his/her icon remains in the conference list and in the *Participants Queue* list. An exclamation point appears next to the *Participant* icon in the *Name* column of all panes and in the conference tree.

In addition, the *Attended* icon is displayed in the *Status* column of the Participants List in the *Monitor* and *Status* panes.

To move a participant to the Operator conference from the Participants Queue tree or Participants Queue window:

1. Display the list of participants in the Participants Queue in the *Browser* or *Status* pane, or in the *Participants Queue* window.
2. Right-click the icon of the participant to be moved to the Operator conference, and then click **Attend** or **Attend with Details**.



If you click **Attend**, the participant is moved to the Operator conference and still appears in the Participants Queue.

If you click **Attend with Details**, the participant is moved to the Operator conference and still appears in the Participants Queue. In addition, the *Attended Participant* window opens. For more details, see *"The Attended Participants Dialog Box" on page 8-41*.

The participant is moved to the Operator conference while his/her icon remains in the conference list and in the Participants Queue list. An exclamation point appears next to the *Participant* icon in the *Name* column of all panes and in the conference tree.

In addition, the *Attended* icon is displayed in the *Status* column of the Participants Queue in the *Monitor* and *Status* panes.

Moving a Participant to the Home Conference

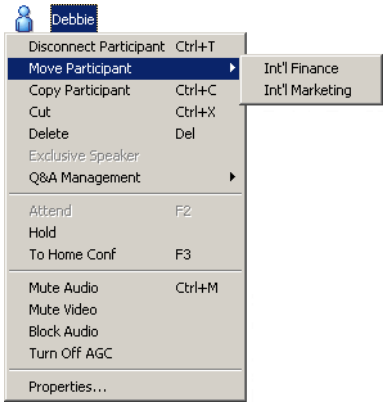
To move a participant to his/her Home conference from the Ongoing Conference list or the Operator conference list:

1. In the *Browser*, *Status*, or *Monitor* panes, display the list of participants in the conference.
2. Use one of the following options:

   a. Using the Move Participant option in the right-click menu:

   — Right-click the icon of the participant to be moved to the Home conference, and then click **Move Participant**.

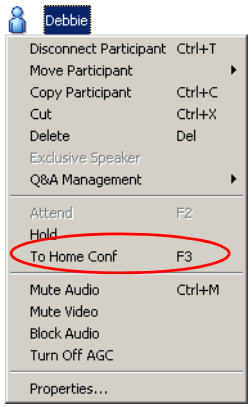
A list of conferences appears.



— Click the name of the Home conference to which to move the participant.

b. Using the To Home Conference option in the right-click menu:

Right-click the icon of the participant to be moved to the Home conference, and then click **To Home Conf**.



The participant connects to the Home conference and is removed from the Participants Queue and/or the Operator conference. The *Attended* or *Hold* icon in the *Status* column of the *Monitor* and *Status* panes disappears.

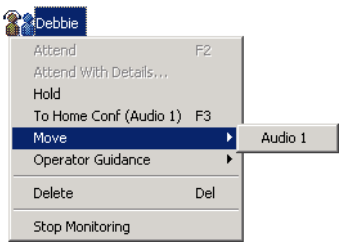
To move a participant to his/her Home conference from the Participants Queue tree or the Participants Queue window:

1. Display the list of participants in the Participants Queue in the *Browser* or *Status* pane, or in the *Participants Queue* window.
2. Move the participant to the Home conference using one of the following options:

   a. Using the Move option in the right-click menu:

   — Right-click the icon of the participant to be moved to the Home conference, and then click **Move**.

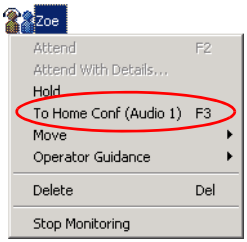
   A list of conferences appears.



   — Click the name of the Home conference to which to move the participant.

   b. Using the To Home Conference option in the right-click menu:

   Right-click the icon of the participant to be moved to the Home conference, and then click **To Home Conf**.



The participant connects to the Home conference and is removed from the Participants Queue and/or the Operator conference. The *Attended* or *Hold* icon in the *Status* column of the *Monitor* and *Status* panes disappears.

Placing a Participant On Hold

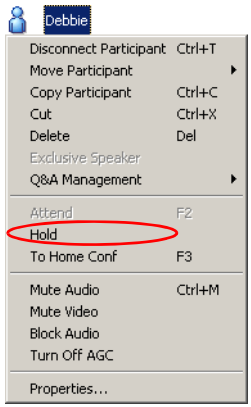
A participant can be placed on hold while in the Participants Queue or when participating in an Operator conference.

Usually, the participant waiting in the Entry Queue or Participants Queue is first assisted by the operator and is then placed on hold until all the participants pertaining to the same conference are assisted and placed on hold. Once all the participants are on hold, they can all be connected at the same time (in one operation) to the conference.

In addition, a participant in an On Going Conference can be placed on hold when he/she is to be excluded from the conference for a short period. To do so, you have to first move the participant from the conference to the Operator conference and then place him/her on hold.

To place a participant on Hold in the Operator conference:

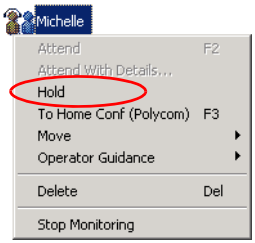
1. In the *Browser*, *Status*, or *Monitor* pane, display the list of participants in the Operator conference.
2. Right-click the icon of the participant to be placed on hold, and then click **Hold**.



The *Participant* icon changes to *Hold* in the *Status* column of the Home conference participants list in the *Monitor* and *Status* panes, and in the Participants Queue.

To place a participant on hold in the Participants Queue tree or the Participants Queue window:

1. Display the list of participants in the Participants Queue in the *Browser* or *Status* pane, or in the *Participants Queue* window.
2. Right-click the icon of the participant to be placed on hold, and then click **Hold**.



The *Participant* icon changes to *Hold* in the *Status* column of the Home conference participants list in the *Monitor* and *Status* panes, and in the Participants Queue.

Performing Operations using the Participants Queue Toolbar

You can perform operations using the Participants Queue toolbar from the following panes and lists:

- *Browser*, *Status*, and *Monitor* panes, On Going Conferences list
- *Browser* and *Status* panes, *Participants Queue* list
- *Participants Queue* window

To move a participant or place him/her on hold using the Participants Queue toolbar:

1. Select the icon of the participant to be operated on.
2. Click the relevant button in the Participants Queue toolbar, as follows:

Table 8-6: Participants Queue Toolbar Buttons

Button	Operation
	To move the participant to the Operator conference.

Table 8-6: Participants Queue Toolbar Buttons (Continued)

Button	Operation
	To place the attended participant on Hold.
	To move the participant to the Home (destination) conference.

For further details on the individual operations refer to the explanations in the section "Performing Operations using the Right-Click Menu" on page 8-55.

Performing Operations using Shortcut Keys

You can perform operations using shortcut keys from the following panes and lists:

- *Browser*, *Status*, and *Monitor* panes, On Going Conferences list
- *Browser* and *Status* panes, *Participants Queue* list
- *Participants Queue* window

To move a participant or place him/her on hold using shortcut keys:

1. Select the icon of the participant to be operated on.
2. Use the appropriate shortcut key, as follows:

Table 8-7: Shortcut Keys

Default Shortcut Key	Operation
<F2>	To move the participant to the Operator conference.
<F3>	To place the attended participant on Hold.
<F4>	To move the participant to the Home (destination) conference.

For further details on the individual operations refer to the explanations in the section "Performing Operations using the Right-Click Menu" on page 8-55.

Moving a Participant Interactively

You can drag and drop a participant to the Operator or Home conference from the following panes and lists:

- *Browser*, *Status*, and *Monitor* pane, Operator conference list
- *Browser* and *Status* pane, *Participants Queue* list
- *Participants Queue* window

To drag and drop a participant to the Operator conference:

1. Expand the On Going Conferences list in the *Browser* pane, to display the *Operator Conference* icon.
2. Drag the icon of the participant to the *Browser* pane and drop it on the *Operator Conference* icon.

To drag and drop a participant to the Home conference:

1. Expand the On Going Conferences list in the *Browser* pane, to display the *Home Conference* icon.
2. Drag the icon of the participant to the *Browser* pane and drop it on the *Home Conference* icon.

Moving a Participant to the Operator Conference by Double-Clicking the Participant's Icon

You can move a participant to the Operator conference by double-clicking the participant's icon in the following panes and lists:

- *Browser* and *Status* pane, *Participants Queue* list
- *Participants Queue* window

To move a participant to the Operator conference by double-clicking the participant's icon:

- Double-click the icon of the participant you want to attend.

  The participant is automatically moved to the Operator conference, and the *Attended Participant* window opens. For more details, see *"The Attended Participants Dialog Box" on page 8-41*.

Moving Multiple Participants to the Home Conference

When several participants are placed on hold, they can all be selected (using standard Windows multi-selection options), and then moved to the appropriate conference together.

To move several participants who are on hold to the Home conference:

1. List the participants who are on hold in the appropriate conference or in the *Participants Queue* tree, or the *Participants Queue* window.
2. Select the participants that are on hold.
3. Move the selected participants to their destination conferences, using one of the following methods:

   a. Using the To Home Conference option in the right-click menu:

   — Right-click the icon of one of the highlighted participants, and then click **To Home Conf**.

   b. Using the Move option in the right-click menu:

   — Right-click the icon of one of the highlighted participants, and then click **Move**.

   — A list of conferences appears.

   — Click the name of the conference to which to move the participants.

   c. Using the Participants Queue toolbar:

   — Click the icon of one of the highlighted participants.

   — Click the **To Home Conf.** button on the Participants Queue toolbar.

   d. Dragging and Dropping the Participant icon:

   — Expand the On Going Conferences list in the *Browser* pane, to display the *Home Conference* icon.

   — Drag the icons of the participants to the *Browser* pane and drop them on the *Home Conference* icon.

   The selected participants are immediately connected to the conference.

9

Conference Reservations

A Reservation is a conference scheduled to start later. Reservations enable you select the conference start date and time or define a recurrent reservation.

Scheduling a conference reservation involves defining the conference parameters, assigning the conference to an MCU, setting the date and time at which the conference is to start and the duration of the conference. How you schedule a conference reservation depends on a number of factors, as shown in Table 9-1.

The MGC Manager allows you to set up and run conferences in mixed networks: H.323, SIP, ISDN, T1-CAS, ATM, and MPI (serial connection). The type of network used is defined individually for each participant in the conference.

Table 9-1: Factors in Deciding Conference Reservation Methods

For these conditions	Do this
The conference parameters are stored in a Reservation template	Start the conference from a template. You can start the conference immediately (On Going Conference) or start it at a later time (Reservation).

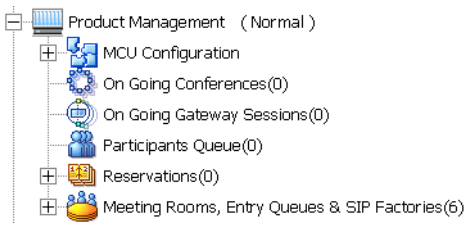
Table 9-1: Factors in Deciding Conference Reservation Methods (Continued)

For these conditions	Do this
There is no Reservation template containing a conference with the properties needed for this conference	If the conference is to start immediately, you can define an On Going Conference. For more details,*see Chapter 4, "About Participants"*. Alternatively, define a conference Reservation in which the current date and time are selected as the conference start date and time. For more details, see *"Defining a New Reservation" on page 9-3*.
	Define a new Reservation directly. For more details, see "Defining a New Reservation" on page 9-3.
	Define a new Reservation template either in the Database or in a Reservation Template file and use this reservation template to start a new On Going Conference or schedule a reservation. For instructions on setting up a Reservation template in the database, see the *MGC Manager User's Guide, Volume II, Chapter 7, "Defining a Reservation Template in the Database"*. For instructions on setting up a Reservation template in a Reservation Template file, see the *MGC Manager User's Guide, Volume II, Chapter 8, "Creating a new Reservation Template file"*.

Defining a New Reservation

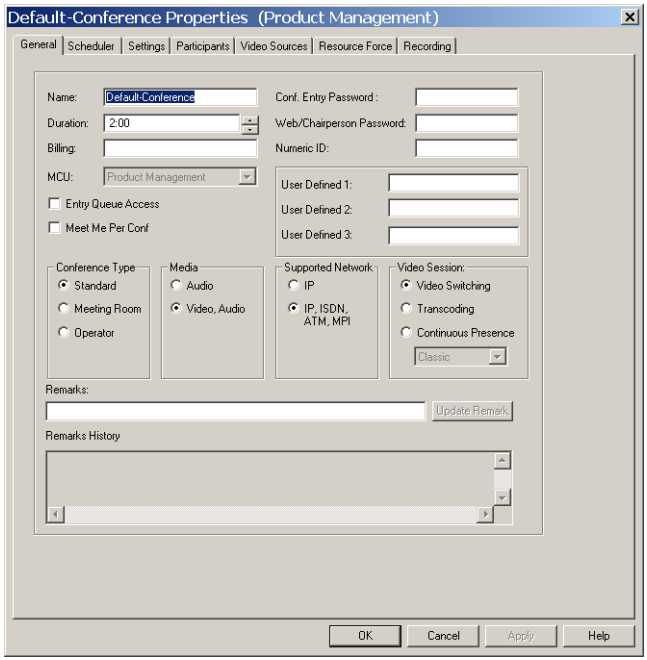
To schedule a new Reservation directly:

1. Connect to an MCU and expand its tree. For details, see *Chapter 3, "Connecting to an MCU" on page 3-21.*



2. Right-click the *Reservations* icon, and then click **New Reservation**.

The *Reservation Properties - General* dialog box opens, allowing you to define the general parameters of the Reservation.

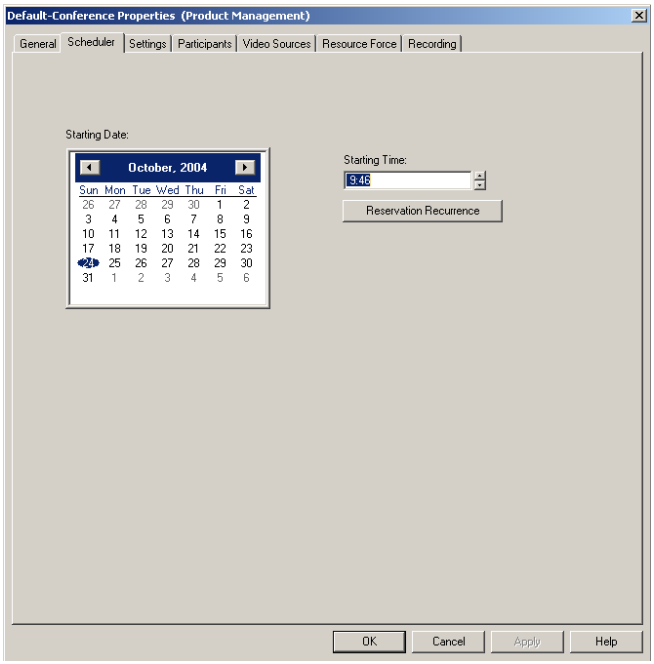


3. In the *Name* box enter the Reservation name.

   Define the Reservation type, duration and other general parameters as for an On Going Conference. For more details, see *Table 4-4, “Conference Properties - General”, on page 4-22.*

4. Click the **Scheduler** tab.

   The *Reservation Properties - Scheduler* dialog box opens.



   The *Scheduler* dialog box is used to define the reservation's date and time.

5. Define the *Scheduler* parameters as follows:

Table 9-2: Scheduler Parameters

Option	Description
Starting Date	By default, the system displays the current date as the scheduled date. If the current date and time is selected for the Reservation it becomes an On Going Conference. To select a date on which the conference should start, use the arrows in the calendar heading to select the month, and then click the required day.

Table 9-2: Scheduler Parameters (Continued)

Option	Description
Starting Time	By default, the system displays the current time as the start time of the conference. To select a time at which the conference should start, set the starting time using the time format taken from the operating system. Highlight the hours or minutes in the box and either use the spin buttons to modify the displayed time, or type a time directly.
Reservation Recurrence	Click this button to define a recurrent reservation and the frequency at which the reservation occurs. For more details, see “Recurrent Reservations” on page 9-17.

6. Click the **Settings** tab.
   The *Reservation Properties - Settings* dialog box opens.
7. Define the **Settings** parameters, as for the On Going Conference. For details, see Chapter 4, “Conference Properties - Settings Parameters” on page 4-29.
8. Click the **Participants** tab.
   The *Reservation Properties - Participants* dialog box opens.
9. Select the conference participants from the list, or define new participants in the *Participants* dialog box, as described in Chapter 4, “Conference Properties - Participants Options” on page 4-48.
10. If you are defining a *Continuous Presence* reservation, click the **Video Source** tab. Otherwise, skip this step.
    The *Reservation Properties - Video Sources* dialog box opens.
11. Select the desired video layout and the required visual effects (only applicable to conferences run on the Video+ card), as described in Chapter 4, “Conference Properties - Video Sources - CP Layout Menus” on page 4-56.
12. Optional. To force the system to use a specific audio, video, or data card of the selected MCU, click the **Resource Force** tab.
    The *Reservation Properties - Resource Force* dialog box opens.

13. Select the appropriate card type to handle the conference. For more information, see Chapter 4, "To define the Video Sources settings:" on page 4-54.

    The MGC Manager provides a digital recording option with the Polycom Conference Recorder, enabling recording of the conference audio channel of both Audio Only and video conferences. For more information, see the *MGC Manager User's Guide, Volume II, Chapter 9, "Recording"*.

Completing the Reservation Definition

14. To complete the Reservation definition procedure, click **OK** from any *Reservation Properties* dialog box.

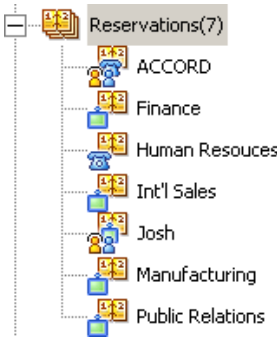
When adding a new participant to a Reservation, the system checks whether a participant with the same name is already defined in any of the other conferences scheduled for the same time. If the participant name already exists in any other conference scheduled to run at the same time, the *Participants Scheduling Conflicts* window opens. For more details see Chapter 4, "Resolving Scheduling Conflicts" on page 4-67.

The reservation is saved on the MCU, and it is added to the Reservations list.

Listing the Current Reservations

To list the reservations currently scheduled on an MCU:

1. Connect to an MCU on which the Reservation was scheduled and expand its tree.
2. Double-click the *Reservations* icon, or click the plus [+] icon next to the *Reservations* icon. The *Reservations* list for the selected MCU is displayed.



Once a Reserved conference starts, it is moved to the On Going Conferences list.

Reservations Icons

Each reservation in the *Reservations* list is identified by an icon and its name. Table 9-3 describes the reservation icons used to identify the reservation type.

Table 9-3: Conference Reservation Icons

Icon	Description
	Conference Reservations category. Includes the list of all reservations currently scheduled on the MCU.
	Video Conference Reservation. A reserved video conference scheduled to start at a designated time.

Table 9-3: Conference Reservation Icons (Continued)

Icon	Description
	Audio Reservation. A reserved Audio Only conference scheduled to start at a designated time.
	Audio Operator Conference Reservation. A reserved Audio Only Operator conference scheduled to start at a designated time.
	Video Operator Conference Reservation. A reserved video Operator conference scheduled to start at a designated time.

Deleting a Reservation

If the conference reservation is cancelled before it has started, you can remove it from the Reservations list on the MCU and free the MCU resources for other conferences.

To delete a Reservation:

1. In the *Browser* pane, expand the *Reservations* list.
2. Right-click the Reservation icon to delete, and then click **Delete**.

A confirmation dialog box opens.

3. Click **Yes** to delete the reservation or **No** to cancel the deletion operation.

   If you have selected **Yes**, the reservation is removed from the *Reservations* list.

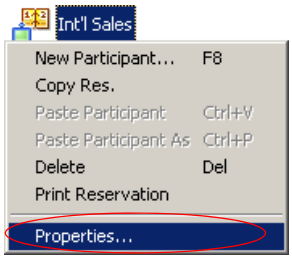
Rescheduling Reservations

In some cases, you may want to reschedule a conference reservation so it will start earlier, immediately, or later than scheduled.

If the MCU time is changed, for example, to adjust to daylight savings time, the reservations are automatically updated.

To reschedule a conference reservation:

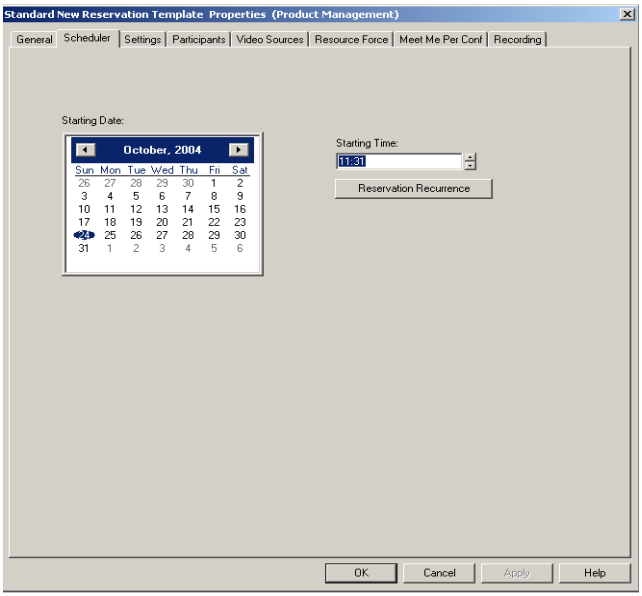
1. Expand the *Reservations* list or double-click the *Reservations* icon.
2. Right-click the *Reservation* icon, and then click **Properties**.



The *Conference Properties* dialog box opens.

3. Click the **Scheduler** tab to define the conference start date and time.

The *Scheduler* dialog box opens.



4. Select the required date and start time.

   To start the conference immediately, change the date to the current date and the starting time to the current time.

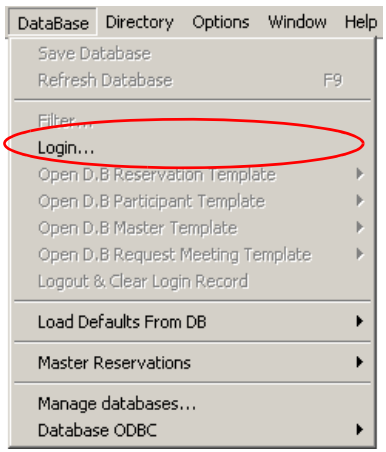
5. Click **OK**.
   The *Conference Properties* dialog box closes.
   If the conference start Date and Time is scheduled in the future, the conference remains in the *Reservations* list.
   If the reservation is scheduled to start immediately, the conference is launched, and it is moved from the *Reservations* list to the *On Going Conferences* list.

Scheduling a Conference Reservation from a Reservation Template (Database)

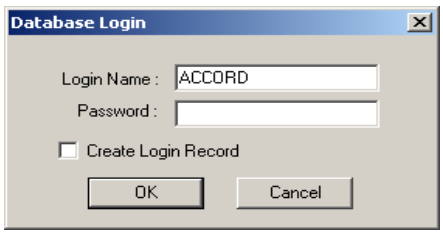
You can use Reservation templates to schedule a conference Reservation to automatically start at a predefined date and time.

To schedule a conference Reservation using a Database Reservation template:

1. Connect to the MCU on which to run the reservation. If you are already connected and logged in, continue with *step 4 on page 9-14*, otherwise connect to the database as described in steps 2 through 3.
2. Click **Login** on the *Database* menu.

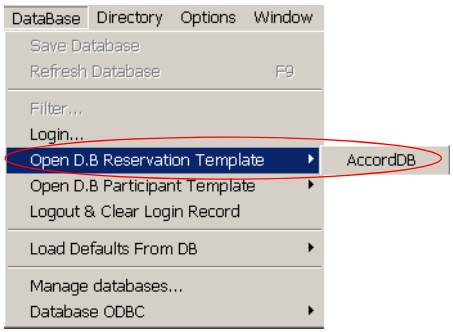


The *Database Login* dialog box opens.



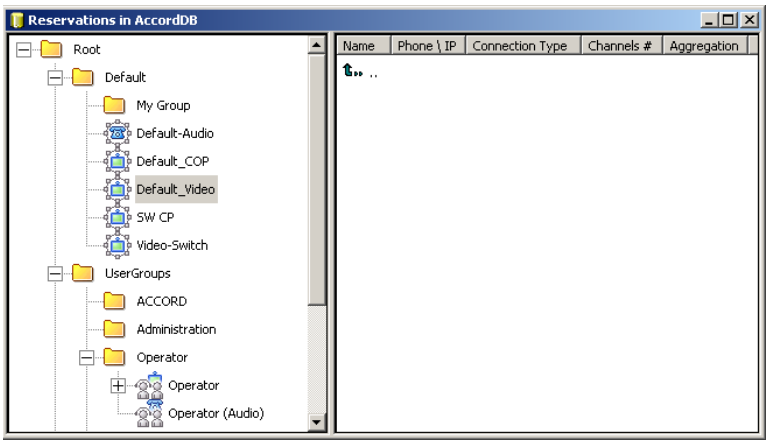
For a detailed description of the database login process and default login names, *see Chapter 3, "Using Default Templates to Start a Conference" on page 3-25.*

3. Enter your *Login Name* and *Password* and click **OK**.
4. On the *Database* menu, click **Open D.B. Reservation Template** and then select the database storing the Reservation Template.

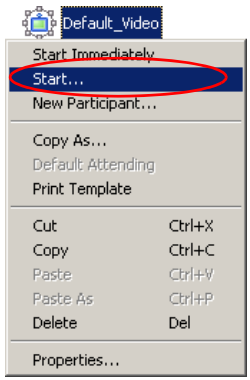


The *Reservations in Database* window is displayed.

5. Expand the Groups hierarchy until you locate the desired Reservation template.

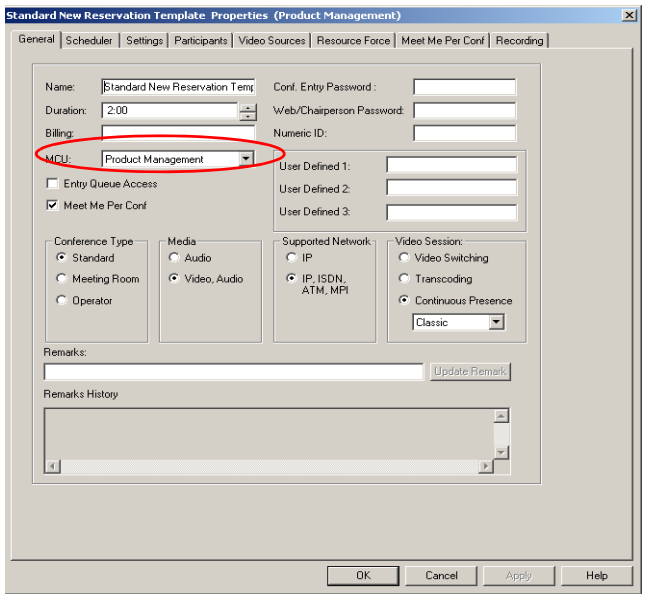


6. Right click the Reservation template icon that you want to schedule and then click **Start**.



The *Conference Properties - General* dialog box opens, allowing you to modify the conference general parameters.

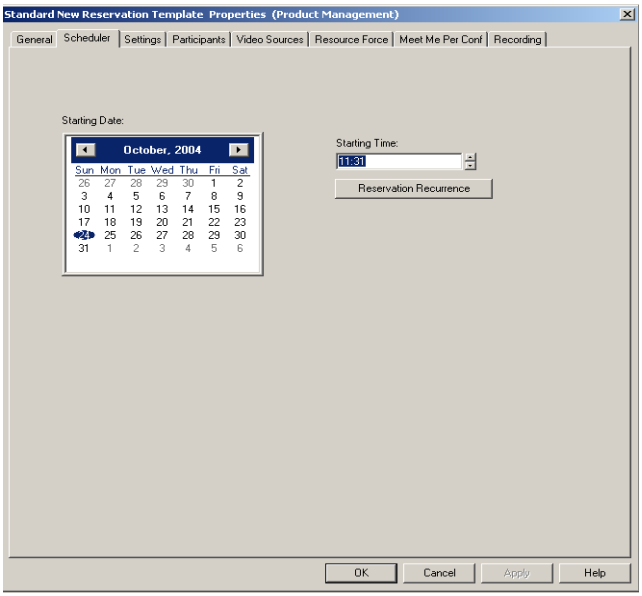
7. Select the MCU on which to run the conference.



If only one MCU is connected to the MGC Manager, the MCU is displayed in the *MCU* box. If several MCUs are connected, they are listed alphabetically, and the first MCU on the list is displayed in the *MCU* box.

If required, modify the conference name, duration and passwords. You can also add Remarks to the conference or read the notes added to the Reservation Template when created. For more details, see *Table 4-4, "Conference Properties - General", on page 4-22*.

8. Click the **Scheduler** tab to define the conference start date and time. The *Scheduler* dialog box opens.



The current date and time are displayed. To define an On Going Conference, skip this tab.

To schedule the conference to start later, select the start date and time for the conference start. For more details, see *Table 9-2, "Scheduler Parameters", on page 9-5*.

At this point, if no changes are required in the template you can complete the conference definition. Otherwise, the remaining tabs are the same as for On Going Conferences, continue with *step 6 on page 9-6*.

9. Click **OK**.
The Reservation is saved on the selected MCU.

Recurrent Reservations

You can preset conferences to occur repeatedly. To do this, you need to set the frequency that you wish the conference to occur while defining the reservation parameters. The MGC Manager automatically creates duplicates of the original reservation, scheduling them according to the selected recurrence frequency. The number of duplicate reservations depends on the number of repeats defined for the reservation.

A recurring reservation can be defined in three ways:

- During the definition of a new reservation.
- By modifying the properties of an existing reservation.
- By using a reservation template from the Reservation database or the Res Template file.

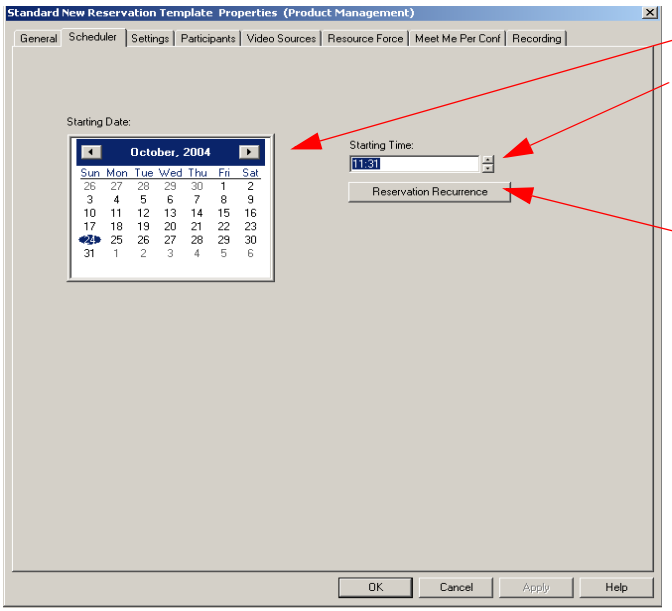
Defining the Reservation Recurrence Properties

The reservation's basic parameters are defined using standard parameter settings, as described in *"Defining a New Reservation" on page 9-3*. The recurrence parameters of a reservation are defined in the *Reservation-Properties Scheduler* tab.

To define Recurring Conference Properties:

1. Define a new Reservation or display the properties of an existing reservation or reservation template.

2. Click the **Scheduler** tab.
   The *Reservation Properties - Scheduler* dialog box opens.

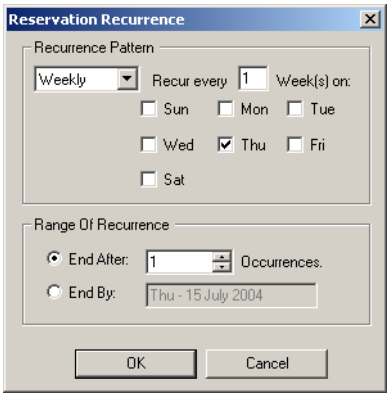


3. Define the start date and time parameters of the first reservation in the recurrence pattern.

   For example, if you are planning a weekly reservation that occurs every Monday, you need to select the date and time of the first Monday on which the conference will occur. When defining a Monthly reservation, the appropriate day of the month must be selected before defining the frequency at which the reservation occurs.

4. Click the **Reservation Recurrence** button to define the frequency at which the reservation occurs.

   The *Reservation Recurrence* dialog box opens.

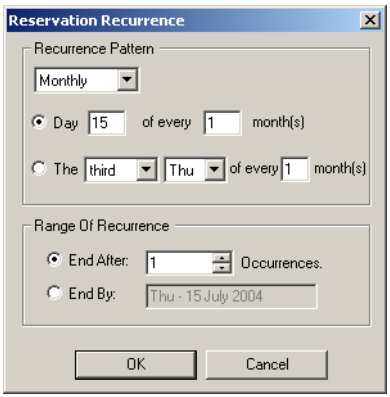


5. The following parameters may be defined:

Table 9-4: Reservation Recurrence Parameters

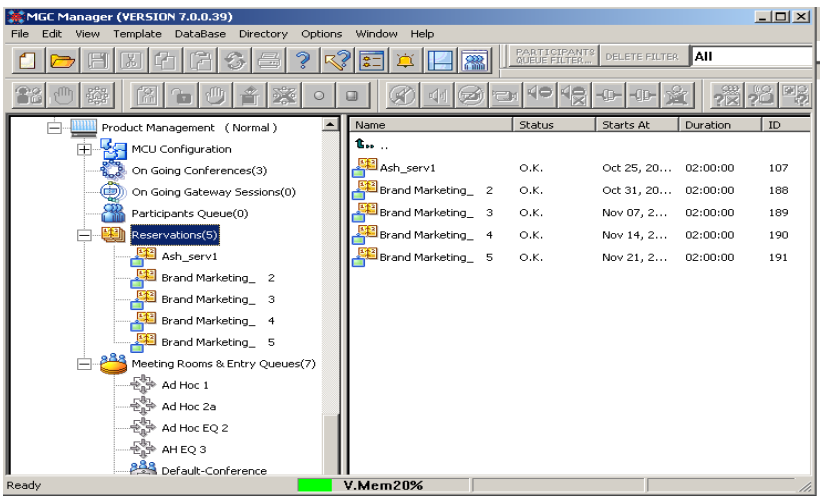
Field	Description
Recurrence Pattern	Select the frequency (Daily, Weekly or Monthly) at which the reservation occurs. If **Daily** is selected, the system automatically highlights all the days of the week. To remove a certain day of the week from the recurrence schedule, click the desired day to clear its check box. If **Weekly** is selected, the system automatically checks the day of the week according to the current day set in the *Scheduler* dialog box. You can also define the recurrence interval in weeks. For example, if you want the reservation to occur bi-weekly, enter the value 2 in the *Week(s)* box. To define a twice a week recurring reservation, click the check box of the additional day of the week at which the conference is to be repeated and set the recurrence interval to 1. If **Monthly** is selected, the system automatically sets the current day as defined in the *Scheduler* dialog box.

Table 9-4: Reservation Recurrence Parameters (Continued)

Field	Description
Recurrence Pattern (cont.)	The reservation recurrence parameters change to let you select the recurrence pattern; choose either the specific “day” (default) of every x month(s) or a specific sequence, such as the “first”, “Thursday” of every x month(s).  **Day dd of every x months** - Repeats a conference on a specified day of the month at a specified monthly interval. For example, if the first reservation is scheduled for the 6th of the current month and the monthly interval is set to 1, the monthly reservation will occur on the 6th of each of the following months. **The 1st-last weekday of every x months** - Repeats a conference on a particular week, on a specified day of the week at a specified monthly interval. For example, a recurrent meeting on the third Monday of every two months.
Range of Recurrence	**End After: x Occurrences** - Ends a repeating reservation after a specific number (X) of occurrences. **End By: dd/mm/yy** - Specify a date for the last occurrence of the recurring reservation. The MGC Manager calculates the number of occurrences according to the selected frequency and the date range.

6. Click **OK**.
7. Define the remaining conference parameters (if you are defining a new reservation directly) using the standard workflow, as described in Chapter 4, "About Participants" on page 4-17.

   Once the reservation has been defined, the system automatically creates the recurring reservations. The name of each recurring reservation is derived from the name of the first reservation, followed by sequential numbers, using the format <name>_X, where X is its sequential order. For example, if the first reservation is named "Marketing", and the number of occurrences is three, the system creates three reservations, naming the first *Marketing _1*, the second *Marketing _2,* and the third *Marketing _3.*



The name of each of these reservations cannot be modified. However, the parameters of an individual recurrent conference can be modified.

Deleting Recurring Reservations from the Reservations List

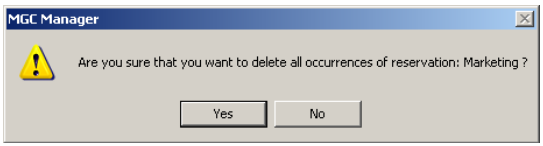
When setting up recurring reservations, these reservations can be deleted as a group.

You can delete an individual reservation out of the recurrence reservation occurrences using the standard Delete procedure. For details, see “Deleting a Reservation” on page 9-10.

To delete a recurring reservation from a recurrent reservation icon:

1. Right-click one of the recurrent reservations icons, and then click **Delete All Reservation Recurrences**.

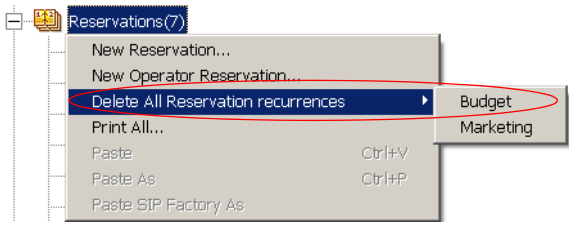
A confirmation box opens.



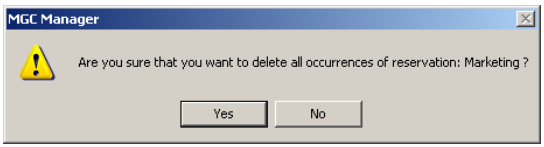
2. Click **Yes** to delete all recurring reservations.

To delete a recurring reservation from the Reservations icon:

1. Right-click on the *Reservations* icon, click the **Delete All Reservation Recurrences** option to open the list of recurrent reservations, and then select the reservation whose occurrences you wish to delete.



A confirmation box opens.



2. Click **Yes** to delete all recurring reservations.

10

Lecture and Presentation Options

This chapter describes three options for viewing a lecturer/presenter in full screen during a conference:

- **Lecture Mode** - all participants view the lecturer in full screen while the lecturer views all conference participants in either a Continuous Presence layout or, for conferences defined as Video Switching, by scrolling through the other participants in full screen.
- **Presentation Mode** - Continuous Presence conferences may be defined to switch automatically to display the current speaker in full screen.
- **Lecture Show** - broadcasting audio and video streams are muted for all conference participants besides the lecturer, who is viewed in full screen.

Lecture Mode

Lecture Mode enables automatic switching between the conference participants in the speaker window, allowing the conference speaker to see all the other conference participants (including Continuous Presence layout) while he/she is speaking. The lecturer is the only one seen by all the other participants throughout the conference, in full screen. While the lecturer is speaking, the system automatically switches between participants according to a predefined interval, showing them sequentially in the lecturer's video window. Lecture Mode is set at the conference level only.

Lecture Mode and Lecture Show are disabled in a Software Continuous Presence conference.

The following features are available in Lecture Mode:

- Selection of the conference lecturer

- Availability in Video Switching, Transcoding and Continuous Presence - Classic conferences (in Continuous Presence - Classic conferences running on a standard Video card, this option is unavailable for asymmetrical video layouts in which at least one window is larger than the others, such as 3+1, 5+1, 8+1, etc.)
- The automatic switching is suspended when one of the participants begins talking, and it is resumed automatically when the lecturer resumes talking
- Can be activated/deactivated during an On Going Conference

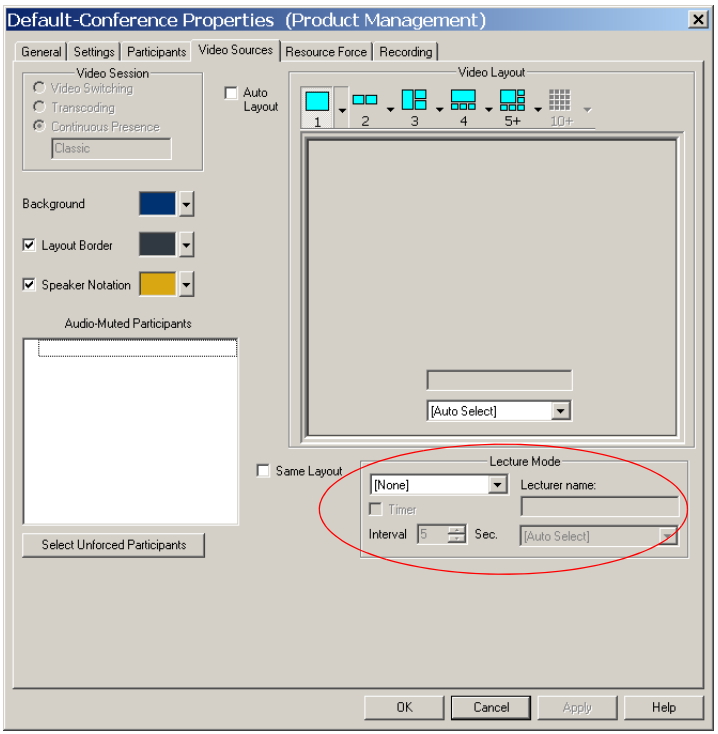
Lecture Mode Definition

A conference can be set to Lecture Mode when defining a new On Going Conference, Reservation or Reservation template.

To define a conference as Lecture Mode:

1. Set the conference as a Standard conference.
2. Define the *Conference Properties - General*, *Schedule*, *Settings* and *Participants* parameters as described in Chapter 4, “Defining a New On Going Video Conference” on page 4-20.
3. Ensure that a participant to be designated as the conference lecturer is added to the list of conference participants in the *Conference Properties - Participants* dialog box.

4. Click the **Video Sources** tab to display the Lecture Mode parameters. The *Conference Properties – Video Sources* dialog box opens.



When the **Same Layout** is selected, Lecture Mode options are disabled.

5. Define the following parameters:

Table 10-1: Lecture Mode options

Option	Description
Lecture Mode	The following options are available: • **None** - Disables the Lecture Mode. • **Lecture Mode** - Enables the Lecture Mode. When enabling the Lecture Mode, an indication, the Lecture Mode icon, appears at the top right corner of the dialog box. • **Presentation Mode** - Enables Presentation Mode. When enabling the Presentation Mode, an indication, the Presentation Mode icon, appears at the top right corner of the dialog box. For more information, see “Presentation Mode” on page 10-9. • **Lecture Show** - Enables the Lecture Show. You must add at least one participant before selecting the Video Sources tab to activate this option. When enabling the Lecture Show, an indication, the Lecture Show icon, appears at the top right corner of the dialog box. For more information, see “Lecture Show” on page 10-14.
Timer	Select the **Timer** check box to enable the automatic switching between participants.
Interval	This option is enabled when the *Timer* option is checked. Define the number of seconds a participant is to be displayed in the lecturer window before switching to the next participant.
Lecturer name	Select the *Lecturer name* from the drop-down list. The list displays the names of all the participants defined for the conference.

6. Click **OK** to confirm the conference settings.

Forcing is enabled at the Conference level only. It applies only to the video layout viewed by the lecturer (as all the conference participants see only the lecturer in full picture).
If an asymmetrical Video layout is selected for the lecturer (i.e. 3+1, 4+1, 8+1), each video window contains a different participant (i.e. one cannot be forced to a large frame and to a small frame simultaneously).

Lecture Mode Monitoring

A conference in which the Lecture Mode is enabled is started as any other conference. The conference runs as an audio activated Video Switching/ Transcoding/Continuous Presence conference until the lecturer connects to the conference. In Continuous Presence conferences, the selected video layout at the time of the reservation is the one that is activated when the conference starts. Once the lecturer is connected, the conference switches to the Lecture Mode.

The order in which the system switches from one participant to another is defined by the order in which the participants were added to the conference. The switching occurs according to the time interval defined for the conference. In a Continuous Presence conference all the participants are displayed on the lecturer screen, hence the *Timer* is insignificant. The *Timer* is active when the number of participants exceeds the number of windows in the selected video layout. In that case, when the switching is performed, the system refreshes the display while replacing the last active speaker with a speaker who was invisible during the last display interval.

When one of the participants is talking, the automatic switching is suspended, showing the current speaker, and it is resumed when the lecturer resumes talking.

If no lecturer is selected for the conference (*Auto Select*), the speaker becomes the conference lecturer with all the inherent prerogatives and adopts the lecturer's status, including the video forcing options in Continuous Presence conferences.

If the lecturer is disconnected during the On Going Conference, the conference resumes the audio activation mode.

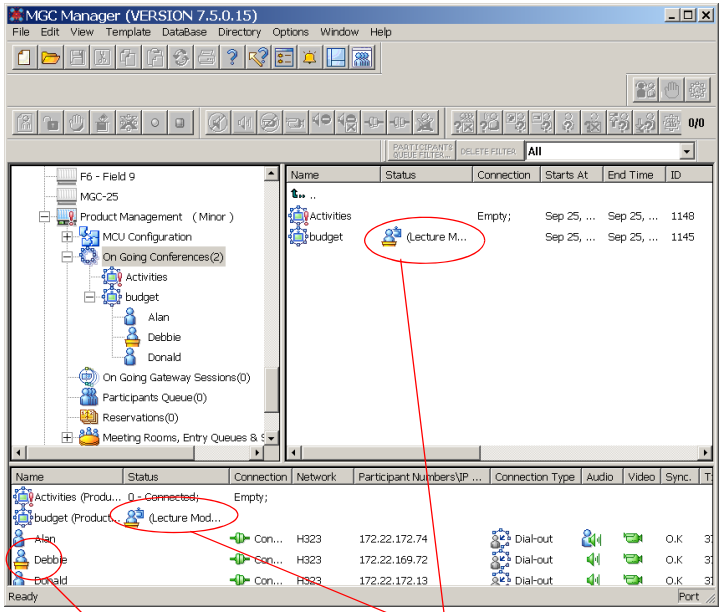
During the On Going Conference you can:

- Enable or disable the Lecture Mode

- Select a new lecturer

If the Lecture Mode is used in a Video Switching conference, only the lecturer can send an Annex D still image. Otherwise, the request to broadcast an Annex D still image is rejected.

Below is an example of a conference in Lecture Mode.


MGC Manager (VERSION 7.5.0.15)
File Edit View Template DataBase Directory Options Window Help
F6 - Field 9
MGC-25
Product Management (Minor)
MCU Configuration
On Going Conferences(2)
Activities
budget
Alan
Debbie
Donald
On Going Gateway Sessions(0)
Participants Queue(0)
Reservations(0)
Meeting Rooms, Entry Queues & S
Name Status Connection Starts At End Time ID
Activities Empty; Sep 25, ... Sep 25, ... 1148
budget (Lecture M... Sep 25, ... Sep 25, ... 1145
Name Status Connection Network Participant Numbers\IP ... Connection Type Audio Video Sync.
Activities (Produ... 0 - Connected; Empty;
budget (Product... (Lecture Mod...
Alan Con... H323 172.22.172.74 Dial-out O.K
Debbie Con... H323 172.22.169.72 Dial-out O.K
Donald Con... H323 172.22.172.13 Dial-out O.K
Ready
Port

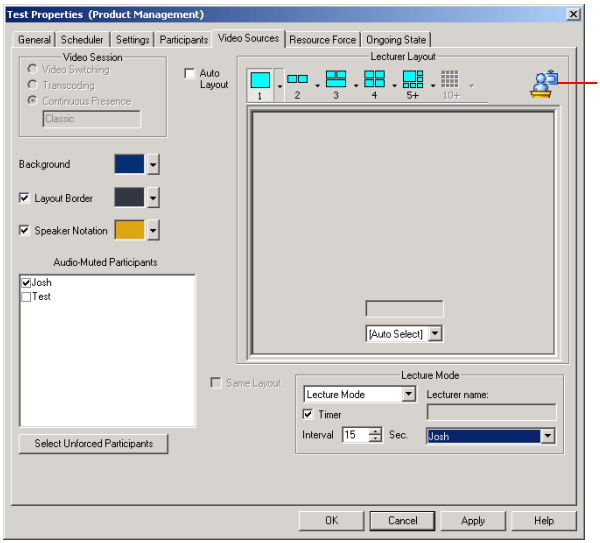
Participant designated as the Lecturer

Lecture Mode conference status indication

To control the Lecture Mode during an On Going Conference:

1. Right-click the On Going Conference icon, and then click **Properties**. The *Conference Properties* dialog box opens.
2. Select the *Participants* tab and ensure that there is at least one Participant in the *Conference Participants* list.

3. Click the **Video Sources** tab.
   The *Conference Properties - Video Sources* dialog box opens.



Icon indicating that Lecture Mode is active

4. You can perform one of the following operations:

   — Enable or disable the Lecture Mode - from the *Lecture Mode* drop-down list, select **None** to disable the Lecture Mode or select **Lecture Mode** to enable it.

   — Change the video layout for the lecturer (in Continuous Presence mode) by selecting another video layout.
   For conferences running on a standard video card, the asymmetrical video layouts such as 3+1, 4+1, 5+1 and 8+1 are disabled in Lecture Mode. The selected layout affects only the lecturer display. The other participants only view the speaker (lecturer or the active speaker) in full screen.

   — Select the conference lecturer by choosing his/her name from the *Lecturer name* drop-down list. The list includes the names of all the conference participants currently connected to the conference.

   — Enable or disable automatic switching between participants displayed on the lecturer monitor window by selecting or clearing the *Timer* check box.

— Change the number of seconds a participant is displayed in the lecturer window before switching to the next participant by entering a new value in the *Interval* field.

In the *Status* column of the Monitor and Status area, the Lecture Mode icon and indication is displayed.

The lecturer is indicated with the following icon:

You can mute and unmute participants and perform additional operations as described in *Chapter 6, "Operations Performed During On Going Conferences"*.

Presentation Mode

Presentation Mode is available in Continuous Presence conferences. In Continuous Presence conferences set to Presentation Mode, when the current speaker's speech extends a predefined time, the conference layout automatically changes to full screen, displaying the current speaker as the conference lecturer on all the conference participant monitors. When the Presentation Mode is active, the speaker views the previous conference layout. When another participant starts talking, the Presentation Mode is cancelled and the conference returns to its predefined video layout.

To enable the Presentation Mode, define the time period that participants are able to speak before they automatically become the conference "speakers" and are viewed in full screen by all the conference participants (default time interval is 15 seconds).

Presentation Mode Guidelines:

- Presentation mode is available with:
  - — Auto Layout
  - — Same Layout
  - — Conference On Port (COP) conferences.
- In a COP conference, when the speaker becomes the conference presenter, the conference layout is automatically set to 1x1 (full screen) and all participants including the active speaker view this layout.
- If the speaker in a video conference is an Audio Only participant, the Presentation Mode is disabled for that participant.
- Video Forcing can be applied while the conference is in normal speaker mode. Video forcing works in the same way as in Lecture Mode when Presentation Mode is activated, that is, forcing is only enabled at the conference level, and it only applies to the video layout viewed by the lecturer.
- Since the Presentation mode is available only in Continuous Presence conferences, it cannot be selected for Operator conferences. In addition, it is not available in Software Continuous Presence conferences.
- When starting a conference in which Presentation Mode is set together with asymmetric conference layouts and the conference is scheduled to run on the Standard Video card, the conference is rejected by the MCU.

- During an On Going Conference set to Presentation Mode that is running on the standard Video card, asymmetric conference layouts are blocked and unavailable for selection.
- When a conference set to both Auto Layout and Presentation Mode is run on the Standard Video card, the definition of the layouts selected for Auto Layout changes. For more details, see the *MGC Administrator's Guide, Chapter 5, "Confer.cfg Flags", Sections "AUTO_LAYOUT" and "AUTO_QUAD_LAYOUT"*.
- Presentation Mode must be enabled in the "system.cfg" configuration file, in the GENERAL section. For more details, see the *MGC Administrator's Guide, Chapter 5, "Edit "system.cfg"*.

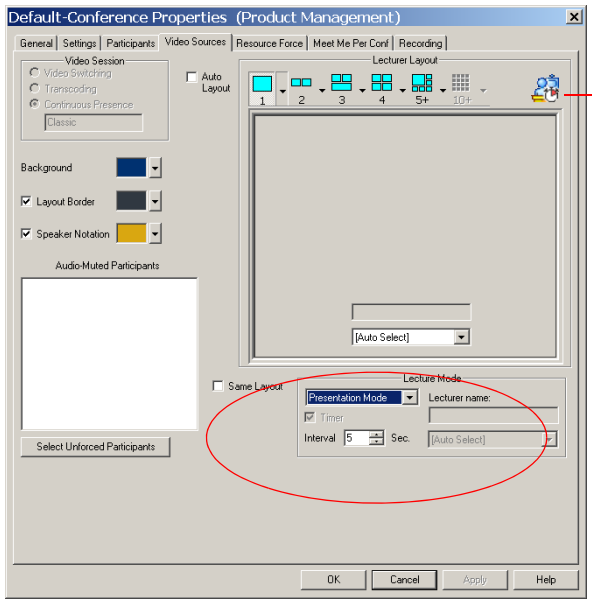
Setting the Presentation Mode for a Conference

The Presentation Mode can only be set in Continuous Presence conferences. It is selected in the Conference *Properties - Video Sources* dialog box.

To select a Presentation Mode Conference:

1. Click the **Video Sources** tab.
   The *Conference Properties - Video Sources* dialog box opens.

2. In the *Lecture Mode* list, select **Presentation Mode**.
   The *Presentation Mode* icon appears at the top right corner of the dialog box.



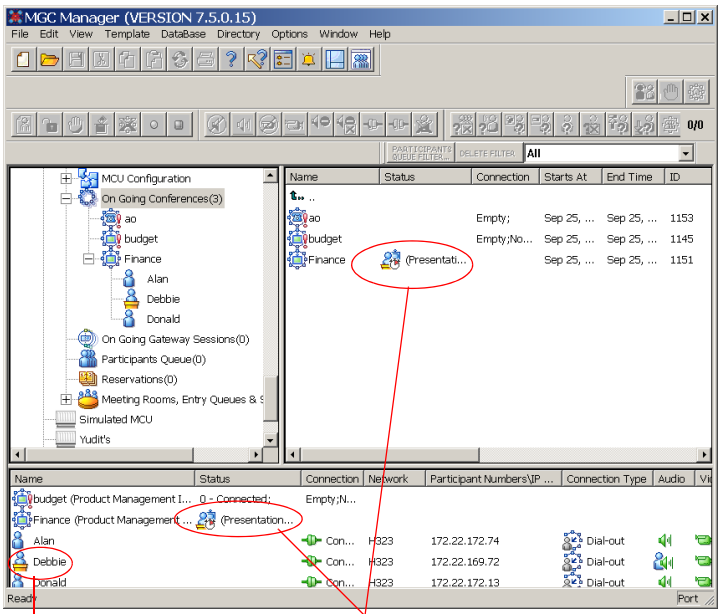
Icon indicating that Presentation Mode is active

3. In the *Interval* field select the amount of time (in seconds) to wait before the speaker automatically becomes the conference lecturer and the video layout changes to full screen.
4. Click **OK**.

Presentation Mode Monitoring

When an On Going Conference is running in Presentation Mode, the *Presentation* icon appears in the *Status* column of the *Status and Monitoring* panes.

The icon of the participant who is the current lecturer changes to the *Lecturer* icon.


MGC Manager (VERSION 7.5.0.15)
File Edit View Template DataBase Directory Options Window Help
MCU Configuration
On Going Conferences(3)
ao
budget
Finance
Alan
Debbie
Donald
On Going Gateway Sessions(0)
Participants Queue(0)
Reservations(0)
Meeting Rooms, Entry Queues & S
Simulated MCU
Yudit's
Name Status Connection Starts At End Time ID
ao Empty; Sep 25, ... Sep 25, ... 1153
budget Empty;No... Sep 25, ... Sep 25, ... 1145
Finance (Presentati... Sep 25, ... Sep 25, ... 1151
Name Status Connection Network Participant Numbers\IP ... Connection Type Audio
budget (Product Management I... 0 - Connected; Empty;N...
Finance (Product Management ... (Presentation...
Alan Con... H323 172.22.172.74 Dial-out
Debbie Con... H323 172.22.169.72 Dial-out
Donald Con... H323 172.22.172.13 Dial-out
Ready
Port

Participant designated as the Presenter

Presentation Mode status indication

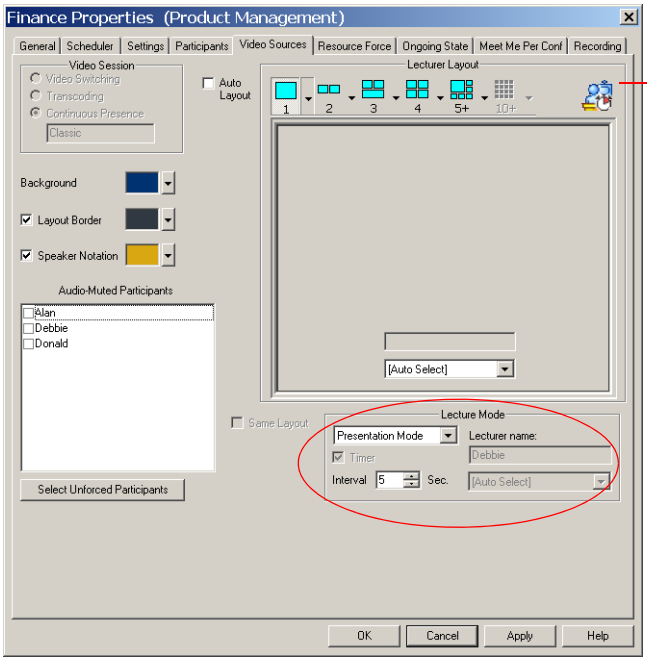
Enabling the Presentation Mode during an On Going Conference

To enable the Presentation Mode during an On Going Conference:

1. Right-click the On Going Conference icon and then click **Properties**.

   The *Conference Properties* dialog box opens.

2. Click the **Video Sources** tab.
   The *Conference Properties - Video Sources* dialog box opens.



Icon indicating that Presentation Mode is active

3. In the *Lecture Mode* list, select **Presentation Mode**.

   To disable the Presentation Mode, select **None** in the *Lecture Mode* list.

4. In the *Interval* field, select the amount of time (in seconds or minutes) to wait before the speaker automatically becomes the conference lecturer and the video layout changes to full screen.

   The conference switches to the *Presentation Mode.*

Lecture Show

The Lecture Show feature offers users the possibility of hearing or viewing a broadcast without participating in the conference, as they can only hear and see the lecturer. The participant hears the conference/broadcast and is unable to interact or communicate, visually or verbally, as his/her audio and video channels are automatically muted. The lecturer or moderator is not able to receive any video or audio from any of the participants during the broadcast of the lecture/show.

Lecture Show Guidelines:

- Requires the selection of one participant as conference lecturer
- Lecturer selection is mandatory at the reservation stage. The lecturer cannot be changed or deleted during the On Going Conference
- All participants excluding the lecturer have their audio and video automatically muted by the MCU. Participants can only hear and see the lecturer
- Full screen (1x1) format is the only layout that may be selected for the Lecture Show
- Participants connecting to the conference prior to the lecturer/moderator logon, hear and see only themselves

Lecture Show Definition

When defining a new On Going Conference, Reservation or Reservation template set the conference as a Standard conference and define the *Conference Properties - General, Schedule, Settings* and *Participants*, parameters as described in *Chapter 4, "Defining a New On Going Video Conference" on page 4-20*.

You must first add a defined participant (from the *Participants* Tab) to attend the conference prior to selecting the **Video Sources** tab and enabling the Lecture Show option.

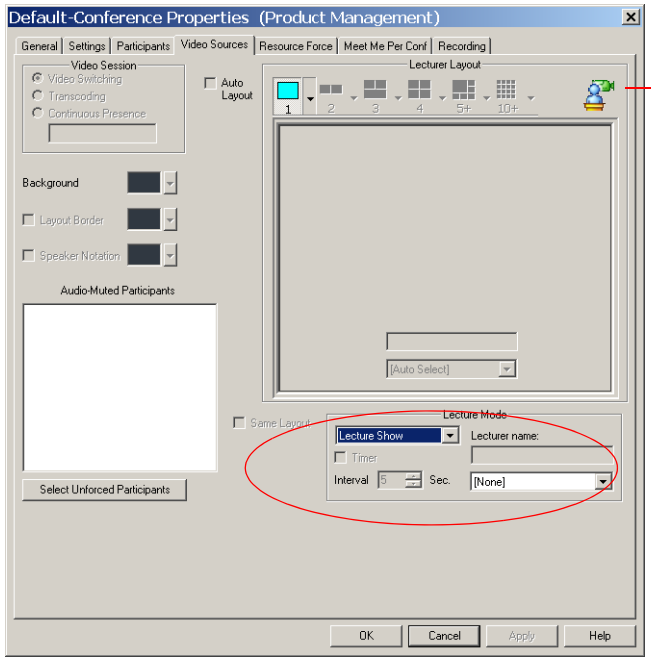
To define a new Lecture Show conference:

1. Click the **Participants** tab.
   The *Conference Properties – Participants* dialog box opens.

2. Select the participant to act as the conference lecturer. You can also select any number of participants to attend the conference. For details on how to select participants refer to *Chapter 4, "Conference Properties - Participants Options" on page 4-48.*

3. Click the **Video Sources** tab.
   The *Conference Properties - Video Sources* dialog box opens.

4. In the Lecture Mode list, select **Lecture Show**.
   The *Lecture Show* icon appears at the top right corner of the dialog box.



Icon indicating that Lecture Show is active

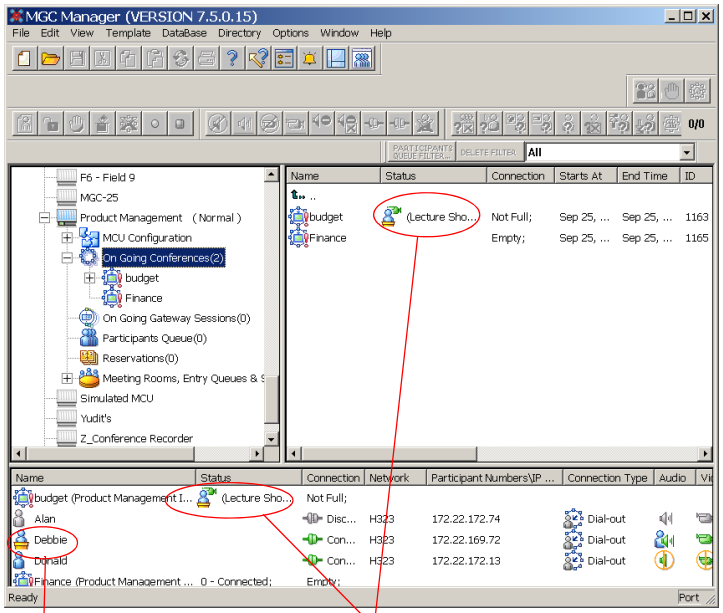
5. In the *Lecturer Name* list, select the name of the participant to act as the conference lecturer.

6. Click **OK** to confirm the conference settings.

Lecture Show Monitoring

A conference in which Lecture Show is enabled is started as any other conference. The conference runs as a Video Switching, Transcoding, Continuous Presence conference until the lecturer connects to the conference. If participants connect to the conference prior to the lecturer, the participants view only themselves.

The operator can only add or disconnect participants to the On Going Conference, extend the conference duration or terminate the conference before its scheduled end time. For details how to perform these operations, see *Chapter 6, "Operations Performed During On Going Conferences"*.


MGC Manager (VERSION 7.5.0.15)
File Edit View Template DataBase Directory Options Window Help
F6 - Field 9
MGC-25
Product Management (Normal)
MCU Configuration
On Going Conferences(2)
budget
Finance
On Going Gateway Sessions(0)
Participants Queue(0)
Reservations(0)
Meeting Rooms, Entry Queues & S
Simulated MCU
Yudit's
Z_Conference Recorder
Name Status Connection Starts At End Time ID
budget (Lecture Sho... Not Full; Sep 25, ... Sep 25, ... 1163
Finance Empty; Sep 25, ... Sep 25, ... 1165
Name Status Connection Network Participant Numbers\IP ... Connection Type Audio
budget (Product Management I... (Lecture Sho... Not Full;
Alan Disc... H323 172.22.172.74 Dial-out
Debbie Con... H323 172.22.169.72 Dial-out
Donald Con... H323 172.22.172.13 Dial-out
Finance (Product Management ... 0 - Connected; Empty;
Ready
Port

Participant designated as the Lecturer

Lecture Show conference status indication

11

Click&View

Click&View is an endpoint application displayed on video endpoints that enables participants to modify their personal video layout and chairpersons to modify the conference video layout. These operations are performed by entering the appropriate code on the endpoint's DTMF input device (usually a remote control). The Click&View application is activated from the MCU.

- Click&View requires Continuous Presence - Classic or Quad mode
- Click&View requires the Video+ and Audio+ cards.
- When Click&View is enabled for the conference, the Click&View splash screen is displayed for 5 seconds on the participant endpoint. If Click&View is disabled for the conference, no splash screen appears.

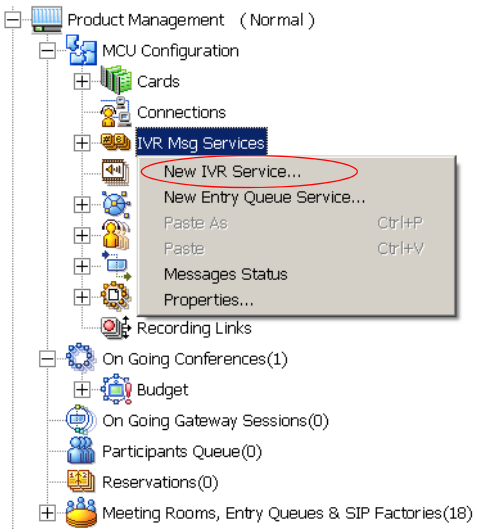
Figure 11-1: Click&View Main Display

Enabling the Click&View Application

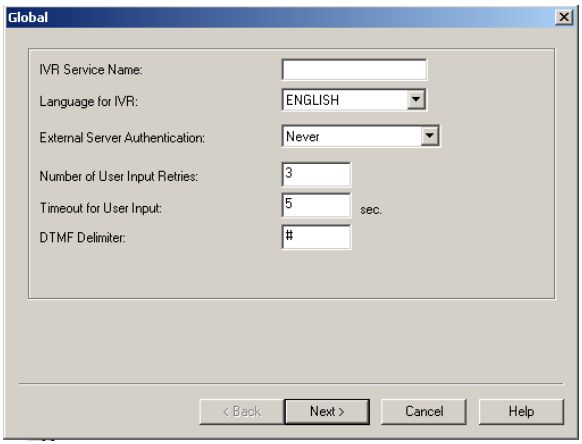
The Click&View application must be enabled in the IVR Service assigned to a conference so participants can select their personal Video Layout from their endpoint. You can create a new IVR Service or you can modify an existing IVR Service to enable the Click&View application.

To enable the Click&View application by defining a new IVR Service:

1. Connect to the MGC unit (MCU).
2. Click the plus [+] icon next to the *MCU* icon to expand its options tree.
3. Double-click the *MCU Configuration* icon, or click the plus [+] icon next to it to display the MCU Configuration options.
4. Right-click the *IVR Services* icon, and then click **New IVR Service**.

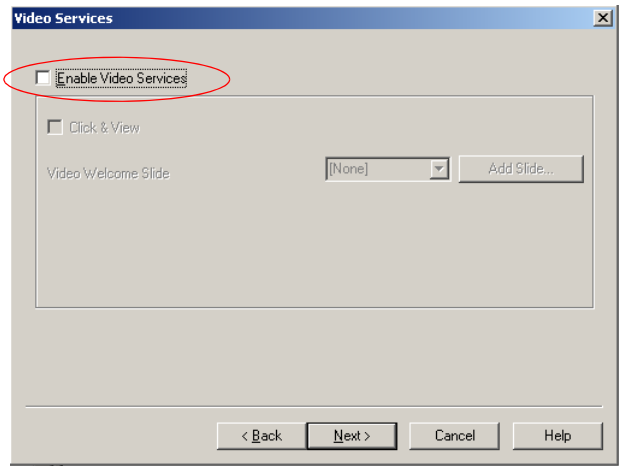


The *IVR-Global* dialog box opens.

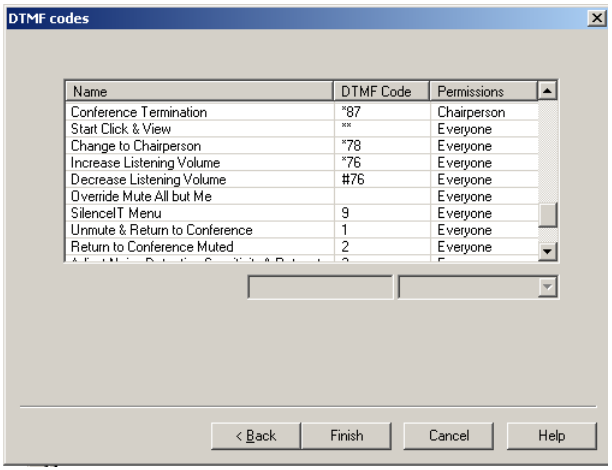


This dialog box enables you to define the general parameters of the IVR Service.

5. Follow the directions for defining a new IVR Service in the *MGC Manager User's Guide, Volume II, Chapter 2, "Defining a New IVR Message Service"*.
6. As you proceed through the wizard, you will open the **Video Services** dialog box.



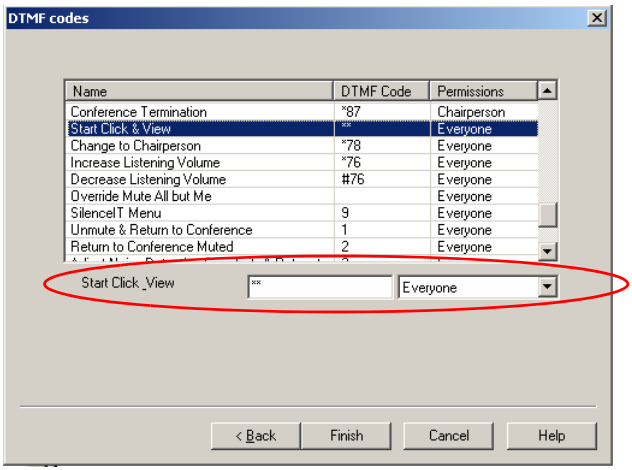
7. Select the **Enable Video Services** check box. Selecting this checkbox also enables the **Click&View** checkbox.
8. Select the **Click&View** check box.
9. Continue following the directions for completing the wizard until you reach the **DTMF codes** dialog box.



This dialog box lists the default DTMF codes of the various functions that can be performed during the conference by all the conference participants or exclusively by the conference chairperson. For a list of available DTMF codes see *"Using DTMF Codes During a Conference" on page 6-88*.

10. To modify the DTMF code assigned to a function, in the *Name* field, click the function whose code you wish to modify.

The appropriate DTMF code appears at the bottom of the list.



11. Select **Start Click&View** in the *Name* field.
12. In the *DTMF Code* (left) field, enter the code. The default is a double asterisk (**).
13. In the *Permission* (right) field, select **Everyone** to enable this function to be used by all the conference participants.
14. Click **Finish** to complete the IVR Service definition.

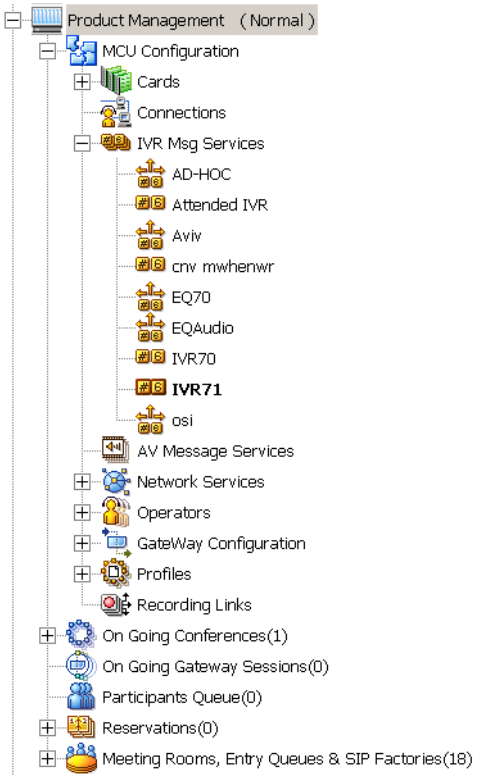
    The new IVR Message Service with the Click&View application enabled is added to the *IVR Services* list.

The number of IVR Services defined for a single MGC unit may not exceed 30 Services.

To enable the Click&View application by modifying an existing IVR Service:

1. Connect to the MGC Unit (MCU).
2. Click the plus [+] icon next to the *MCU* icon to expand its options tree.
3. Double-click the *MCU Configuration* icon or click the plus [+] icon next to the *MCU Configuration* icon to expand the MCU's Configuration options.

4. Expand the *IVR Msg Services* tree.



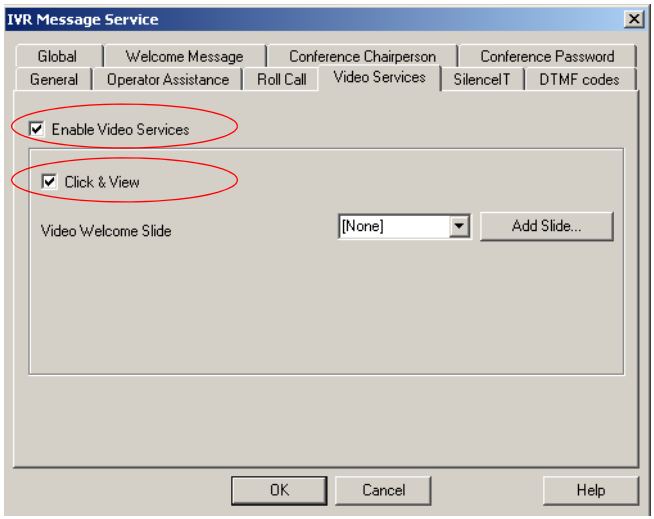
   The list of IVR Messages Services is displayed.

5. Double-click an IVR Message Service or right-click the IVR Service you want to modify, and then click **Properties.**

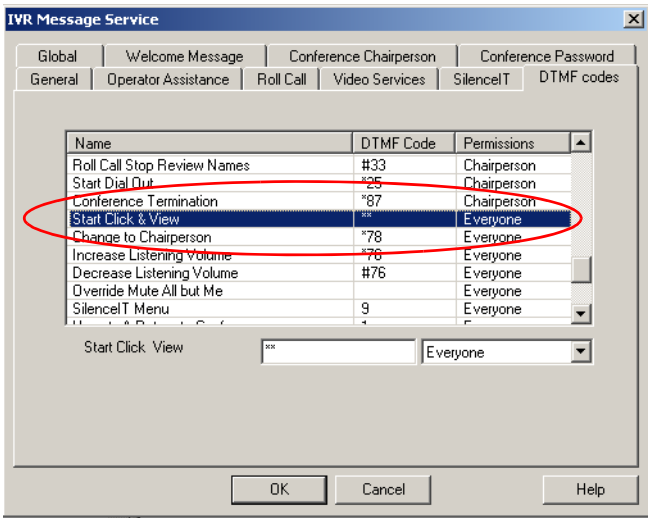
   The *IVR Message Service* dialog box opens.

6. Click the **Video Services** tab.

The *IVR Message Service - Video Services* dialog box appears.



7. Select the **Enable Video Services** check box.
8. Select the **Click&View** check box.
9. Click the **DTMF codes** tab to view and/or modify the DTMF code assigned to the activation of the Click&View application from the participants endpoint.

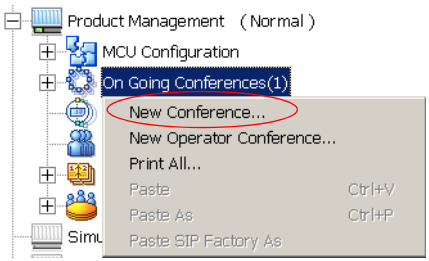


10. Select **Start Click&View** in the *Name* field.
11. In the *DTMF Code* (left) field, enter the required code. The default DTMF code is a double asterisk (**).
12. In the *Permission* (right) field, select **Everyone** to enable this function to be used by all the conference participants.
13. Click **OK** to complete the definition of the IVR Service.

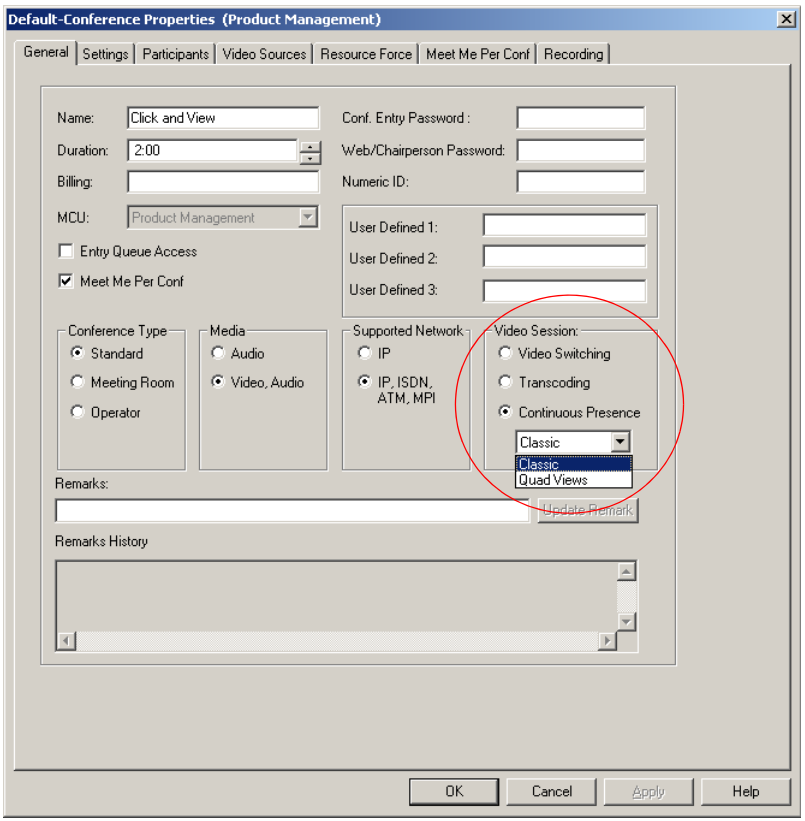
Enabling the Click&View Application for a Conference

To enable the Click&View Application in a Conference:

1. Connect to an MCU and expand its tree.
2. Right-click the *On Going Conferences* icon, and then click **New Conference**.

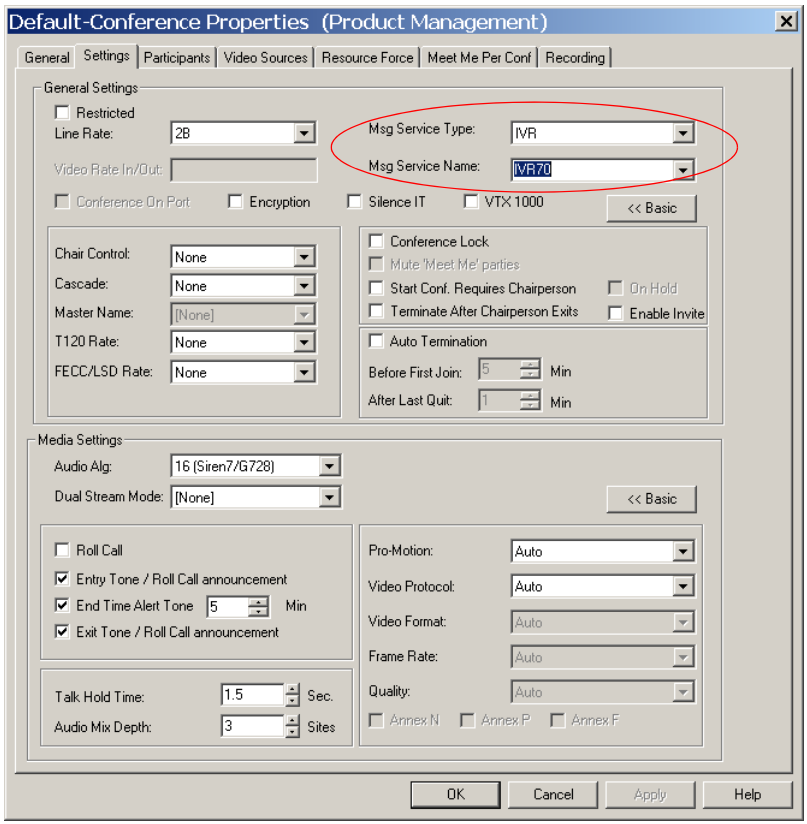


The *Conference Properties - General* dialog box opens.



3. In the *Video Session* box, click **Continuous Presence** and then select either **Classic** or **Quad Views**.

4. Click the **Settings** tab.
   The *Conference Properties - Settings* dialog box opens.



5. In the *Msg Service Type* field, select **IVR** to enable IVR services.
6. Select an IVR service from the *Msg Service Name* drop-down list in which the Click&View option is enabled.

Using the Click&View Application

When a participant connects to a Click&View enabled conference, a Click&View splash screen is displayed. From this point on, until the end of the conference, the participant may modify his personal video layout, or return to the conference video layout. The chairperson may also modify the conference layout. The Click&View application is activated from the endpoint's DTMF input device, such as a remote control or a virtual remote control.

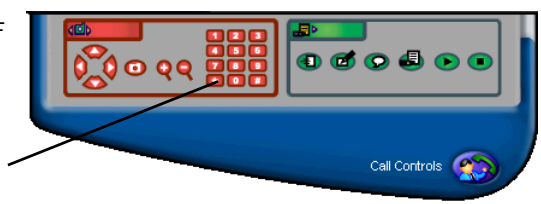
To activate the Click&View Application:

- Enter the appropriate DTMF code via the DTMF input device.

  The default DTMF code for activating the Click&View is double-asterisk (******). This code can be modified in the IVR service.

On Polycom ViaVideo, you can use the virtual remote control to enter the appropriate DTMF code

Click the asterisk key twice to activate the Click&View application



The Click&View application is displayed on the endpoint's screen.

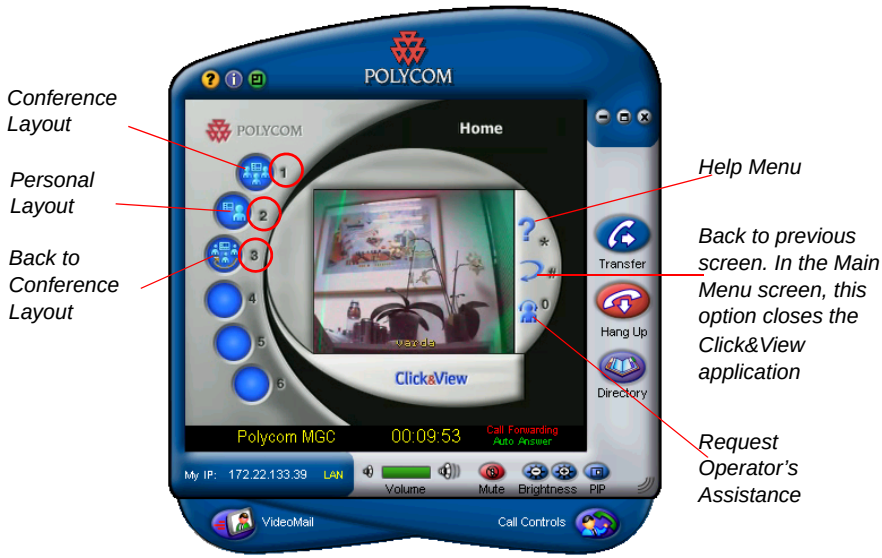
Figure 11-2: Chairperson Click&View Display

Figure 11-3: Participant Click&View Display

The conference view in the Click&View main display area is 1x1 (in Classic conferences only).

Click&View Menu Options

The Click&View application has two modes, *Chairperson* and *Participant*.



For the *Chairperson*, the *Home* screen presents six options with the appropriate DTMF codes. For a *Participant*, five options are enabled while the conference layout option is disabled. To activate each menu option, use your DTMF input device to select a DTMF code (see the Help screen).

Table 11-1: Click&View Main Menu Options

Icon	Description	DTMF Code	Action
	Conference Layout	**1**	Enables the Chairperson to modify the conference layout for all participants.
	Personal Layout	**2**	Enables each participant to modify the video layout displayed on his/her screen. This change does not affect other participants.

Table 11-1: Click&View Main Menu Options (Continued)

Icon	Description	DTMF Code	Action
	Return to Conference Layout	**3**	Enables the participant to cancel his/her personal layout and view the layout currently selected for the conference.
	Help	*****	Displays the Help screen.
	Back	#	Displays the previous screen. When selected in the *Home* Menu, closes the Click&View application for this participant.
	Operator Assistance	**0**	Requests Operator assistance. Adds the participant to the *Participants Queue* in the MGC Manager and exits the Click&View application.

Conference Layout (Chairperson Only) Options

The Chairperson can change the current conference layout for all the conference participants viewing the conference layout. Participants who view their personal layout will not be affected. However, when they return to the conference layout, they will view the new conference layout.

To select another layout for the conference:

1. From your endpoint activate the Click&View application.
2. In the *Click&View Home* screen, enter **1** on the DTMF input device.

This DTMF value activates the Change Conference Layout screen.

The video layout options available in the Classic or Quad Views are displayed in the *Conference Layout* menu.

The following video layouts are available in *Continuous Presence - Classic* and *Quad Views*. Each layout is represented by a DTMF code.

Table 11-2: Available Video Layouts

DTMF Code	Classic CP	Quad Views CP
1		
2		
3		
4		
5		

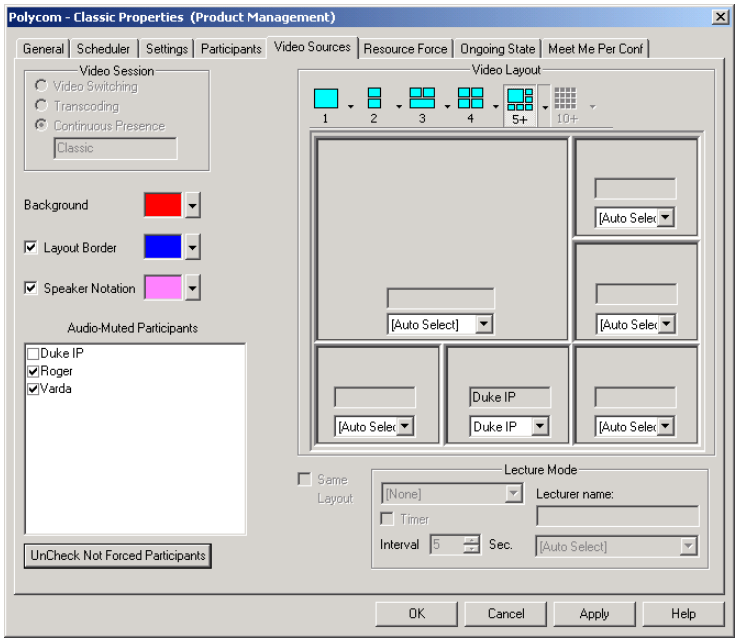
Table 11-2: Available Video Layouts (Continued)

DTMF Code	Classic CP	Quad Views CP
6		

3. On the endpoint's DTMF input device, enter the DTMF code displayed next to the desired layout. For example, if the desired layout in Continuous Presence Classic is the 5+1 layout, enter **5** as the DTMF code.
   The Click&View application closes and the new conference layout is shown on the endpoint's screen.
   The new layout is viewed from any endpoint that is not currently using a personal layout.

Viewing the New Layout in the MGC Manager

The MGC Manager application is updated with the new layout selected for the conference. The new layout can be checked in the *Conference Properties - Video Sources* dialog box.



Personal Layout Options

Participants in a Click&View enabled conference may change their personal video layouts. This layout is viewed only by the participant modifying the layout. All other participants, except for participants currently viewing their own personal layouts, see the conference layout.

To select a Personal Layout:

1. From your endpoint activate the Click&View application.
2. In the *Click&View Home* screen, enter **2** on the DTMF input device.

This DTMF value activates the Personal Layout screen.

The available video layouts are displayed in the *Personal Layout* menu screen. Table 11-2 on page 11-16 lists the available layouts for Continuous Presence Classic and Quad Views.

3. On the endpoint's DTMF input device, enter the DTMF code displayed next to the desired layout. For example, if the desired layout in Continuous Presence Classic is 2x2, enter **4** on the endpoint's remote control.

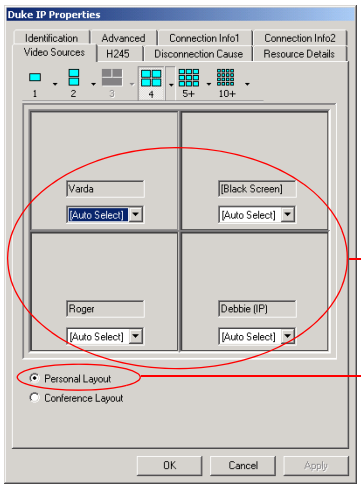
The Click&View screen closes and the new personal layout is shown on the endpoint's screen. The new layout is only viewed on the endpoint selecting it.

Figure 11-4: 2x2 Click&View Display

To View the Personal Layout in the MGC Manager:

The MGC Manager application is updated with the new layouts selected for the participant.

The new video layout can be checked in the *Participant Properties - Video Sources* dialog box.



The Personal Layout selected by the participant

Indicates that this participant is currently viewing a Personal Layout, as opposed to viewing the Conference Layout

Personal Layout may also be modified from the *Participant Properties - Video Sources* dialog box by the operator, or from the WebCommander application.

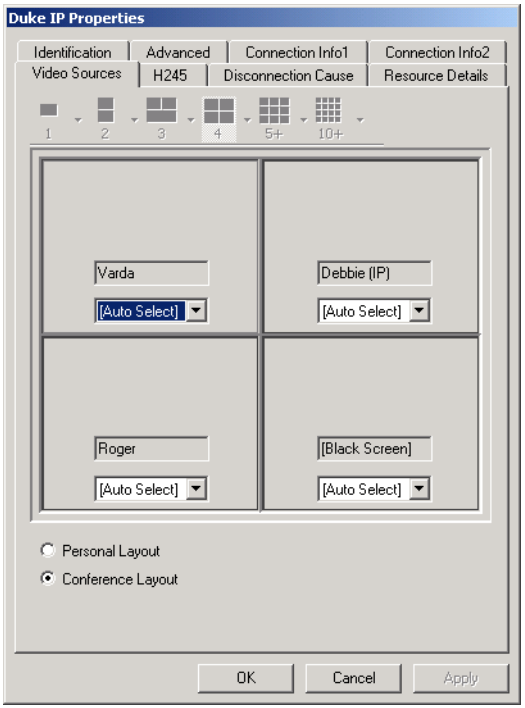
Returning to the Conference Layout

If a participant has selected a video layout other than the conference layout, the participant can return to the conference layout display by entering the appropriate DTMF code in the Click&View application.

To return to the conference layout display:

1. From the endpoint, activate the Click&View application.
2. In the *Click&View Home* screen, enter **3** on the DTMF input device, to activate this option.

   Click&View closes and the endpoint's monitor displays the conference layout.
   The *Participant Properties* are updated accordingly.



Getting Help

You can get help for the *Click&View* options by entering the appropriate DTMF code in the Click&View application.

To get help about Click&View options:

1. In the Click&View screen, on the endpoint's DTMF input device, enter ***** to activate the Help option.

Help topic describing the Click&View Home options, and how to select an option using the DTMF input device.

While viewing the Main Menu Help topic, you can get help on the various Click&View options.

2. On the endpoint's DTMF input device, if you enter a number or symbol (1,2,3,0, or *) that corresponds to a Click&View DTMF command, the appropriate help topic is displayed. For example, enter **2** on the DTMF input device and the system displays the Personal Layout topic.

Help topic describing how to change the participant's Personal Layout display.

Returning to the Previous Screen

If you are in the *Video Layout* menu screen, you can return to the previous screen by entering the appropriate DTMF code (default code is pound key, #) on the DTMF input device.

If you are in the Help screen, selecting the back option, closes the Help topic and displays the Click&View Main menu screen.

To return to the previous screen:

- Enter the pound key, **#** on the endpoint's DTMF input device.

Requesting Operator Assistance

You can request the operator's assistance by entering the appropriate DTMF code on the DTMF input device.

To request Operator Assistance from the Click&View screens:

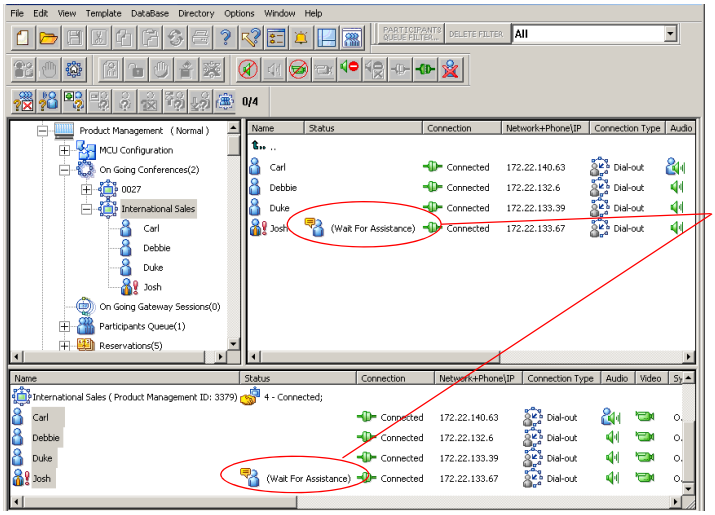
- On the DTMF input device, enter (zero) **0** to request the operator's assistance.

  The Click&View application closes and you are returned to the conference to wait for operator assistance.

  There is no indication on your endpoint's screen that you have been added to the *Participant Queue*.

Assistance Request in the MGC Manager Application

When the participant requests help from the Click&View application, the participant is added to the *Participant Queue* in the MGC Manager window. In addition, an icon is displayed in the *Status* column indicating that this participant is waiting for assistance.



The status of a participant who has requested assistance. This participant is also added to the participant queue.

A

Appendix A: Disconnection Causes

If a participant was unable to connect to a conference or was disconnected from an On Going Conference, the *Participant Properties - Disconnection Cause* dialog box indicates the cause category, whether it is audio or video related, and details the cause message. In some cases, a possible solution may be indicated.

This appendix details the cause messages displayed in the Cause field and their explanation

For a full list of disconnection cause messages for the current MGC Manager version, refer to the topic: “ACCOngoingParticipant:GetDisconnectCause”, in the *MGC C++ API* e-book.

Table A-1: Primary Disconnection Reasons

Category	Cause Message	Description
Operator Disconnect	Disconnected by operator	The operator disconnected the endpoint from the conference. (ISDN and IP)
No Net Connection	No net connection	The network failed to connect to the network card. (ISDN only)
Participant Hang-Up	Party hang up	The endpoint hung up. (ISDN only)
None	Password Failure	The participant entered the wrong password in the IVR, or didn’t enter a password. (ISDN and IP)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
V-Gate No Response	V-gate does not respond	The V-Gate was unable to negotiate a connection with the endpoint. (Video participant parameter) (ATM only)
Security Failure	Remote device capabilities do not support encryption	The endpoint failed to encrypt. (ISDN only)
	A common key exchange algorithm could not be established between the MCU and the remote device	The endpoint does not support the local encryption key exchange algorithm. (ISDN only)
	A common encryption algorithm could not be established between the MCU and the remote device	The endpoint does not support the local encryption algorithm. (ISDN only)
	Remote device did not open the encryption signaling channel	The endpoint did not open the encryption signaling channel. (ISDN and IP)
	The remote device key exchange algorithm message was not received by the MCU	The MCU did not receive the remote encryption key exchange algorithm capabilities from the endpoint. (ISDN only)
	The remote device encryption algorithm message was not received by the MCU	The MCU did not receive the remote encryption algorithm capabilities from the endpoint. (ISDN only)
	The encryption setup process did not end on time	The encryption setup process did not end on time. (ISDN only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
Security Failure (cont.)	Remote device cannot encrypt	The endpoint failed to encrypt. (ISDN only)
	The remote device failed to start encryption system	The endpoint failed to start the encryption system. (ISDN only)
	Remote devices selected encryption algorithm does not match the local selected encryption algorithm	The encryption algorithm selected by the endpoint does not match the MCU's encryption algorithm. (ISDN and IP)
	Encryption key exchange failed	Encryption key exchange failed. (ISDN only)
Bonding Failure	Bonding failure	Bonding negotiation failed. For example, the endpoint didn't reply. (ISDN only)
	Long delay between channels	The bonding channels cannot be synchronized by the MUX, because the delay in data transfer between the channels is too long, or downspeed is required and the endpoint supports downspeeding, but the MCU doesn't. (ISDN only)
	Internal error	Internal error occurred. (ISDN only)
	No answer from remote participant	Bonding failure due to timeout. (ISDN only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
Bonding Failure (cont.)	Error in dialing additional channels	H.221 bonding error. The endpoint declared less channels than the MCU wanted, or an error occurred when attempting to open additional channels. (ISDN only)
Bad H243 Connection	Full bitrate connection failure	The system can not establish a connection with the participant using the maximum possible line rate capacity. (ISDN only)
	Capabilities exchange failure in establishing call	The initial capabilities exchange failed. For example, the endpoint didn't send any capabilities. (ISDN only)
	Capabilities exchange failure in change mode	Failure to exchange capabilities when the MCU requested that the endpoint change protocol. For example, the endpoint didn't reply. (ISDN only)
	Unspecified	Unspecified error occurred. (ISDN only)
	Not received end of initial communication	The endpoint did not send an initial capabilities set. (ISDN only)
Resource Deficiency	Resources deficiency	Insufficient resources available. (ISDN only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
Resource Deficiency (cont.)	Net port deficiency	Insufficient network resources to handle the ISDN call. (ISDN only)
	MUX port deficiency	Insufficient MUX resources. (ISDN only)
	Audio port deficiency	Insufficient audio ports. (ISDN and IP)
	Video port deficiency	Insufficient video resources. (ISDN and IP)
	Audio message port deficiency	Insufficient audio resources available for IVR or Greet and Guide messages. (ISDN and IP)
	H323 deficiency	Insufficient IP resources. (IP only)
	T123 port deficiency	Insufficient data resources. (ISDN and IP)
	H323 call close. Gatekeeper connection ID failed	Internal system error. (IP only)
	H323 call close. No port left for audio	Insufficient audio ports. (IP only)
	H323 call close. No port left for video	The required video ports exceed the number of ports allocated to video in fixed ports. (IP only)
	H323 call close. No port left for T120	The required data ports exceed the number of ports allocated to data in fixed ports. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
Resource Deficiency (cont.)	H323 call close. No control port left	The required control ports exceed the number of ports allocated to control data in fixed ports. (IP only)
	H323 call close. No port left for video cont	The required video content ports exceed the number of ports allocated to video content in fixed ports. (IP only)
	H323 call close. Small bandwidth	The gatekeeper allocated insufficient bandwidth to the connection with the endpoint. (IP only)
	H323 call close. No port left	There are no free ports left in the IP card. (IP only)
Gatekeeper Failure	Called party not registered	The called endpoint is not registered in the gatekeeper. (IP only)
	Caller not registered	The calling endpoint is not registered in the gatekeeper. (IP only)
	H323 call close. ARQ timeout	The endpoint sent an ARQ message to the gatekeeper, but the gatekeeper did not respond before timeout. (IP only)
	H323 call close. DRQ timeout	The endpoint sent a DRQ message to the gatekeeper, but the gatekeeper did not respond before timeout. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
	H323 call close. Alt Gatekeeper failure	An alternate gatekeeper failure occurred. (IP only)
	H323 call close. Gatekeeper failure	A gatekeeper failure occurred. (IP only)
H323 Failure	H323 call close. Remote busy	The endpoint was busy. (Applicable only to dial-out and IP only)
	H323 call close. Normal	The call ended normally, for example, the endpoint disconnected. (IP only)
	H323 call close. Remote reject	The endpoint rejected the call. (IP only)
	H323 call close. Remote unreachable	The gatekeeper could not find the endpoint's address. (IP only)
	H323 call close. Unknown reason	The reason for the disconnection is unknown, for example, the endpoint disconnected without giving a reason. (IP only)
	H323 call close. Closed by MCMS	The MCU disconnected the call. (IP only)
	H323 call close. Need maintenance	A card failure occurred. (IP only)
	H323 call close. Small bandwidth	The gatekeeper allocated insufficient bandwidth to the connection with the endpoint. (IP only)
	H323 call close. Gatekeeper reject ARQ	The gatekeeper rejected the endpoint's ARQ. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
H323 Failure (cont.)	H323 call close. No port left	There are no ports left in the IP card. (IP only)
	H323 call close. Gatekeeper DRQ	The gatekeeper sent a DRQ. (IP only)
	H323 call close. No destination IP value	For internal use. (IP only)
	H323 call close. Remote has not sent capability	The endpoint did not send its capabilities to the gatekeeper. (IP only)
	H323 call close. Audio channels not open	The endpoint did not open the audio channel. (IP only)
	H323 call close. Need to wait T120 board	For internal use. (IP only)
	H323 call close. Bad remote cap	There was a problem in the capabilities sent by the endpoint. (IP only)
	H323 call close. Capabilities not accepted by remote	The endpoint did not accept the capabilities sent by the gatekeeper. (IP only)
	H323 failure	Internal error occurred. (IP only)
	H323 call close. Remote stop responding	The endpoint stopped responding. (IP only)
	H323 call close. Master slave problem	A People + Content cascading failure occurred. (IP only)
SIP Failure	SIP bad name	The conference name is incompatible with SIP standards. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
SIP Failure (cont.)	SIP bad status	A general IP card error occurred. (IP only)
	SIP busy everywhere	The participant's endpoints were contacted successfully, but the participant is busy and does not wish to take the call at this time. (IP only)
	SIP busy here	The participant's endpoint was contacted successfully, but the participant is currently not willing or able to take additional calls. (IP only)
	SIP capabilities don't match	The remote device capabilities are not compatible with the conference settings. (IP only)
	SIP card rejected channels	The IP card could not open the media channels. (IP only)
	SIP client error 400	The endpoint sent a SIP Client Error 400 (Bad Request) response. The request could not be understood due to malformed syntax. (IP only)
	SIP client error 402	The endpoint sent a SIP Client Error 402 (Payment Required) response. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
SIP Failure (cont.)	SIP client error 405	The endpoint sent a SIP Client Error 405 (Method Not Allowed) response. The method specified in the Request-Line is understood, but not allowed for the address identified by the Request-URI. (IP only)
	SIP client error 406	The endpoint sent a SIP Client Error 406 (Not Acceptable) resources. The remote endpoint can not accept the call because it does not have the necessary responses. The resource identified by the request is only capable of generating response entities that have content characteristics not acceptable according to the Accept header field sent in the request. (IP only)
	SIP client error 407	The endpoint sent a SIP Client Error 407 (Proxy Authentication Required) response. The client must first authenticate itself with the proxy. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
SIP Failure (cont.)	SIP client error 409	The endpoint sent a SIP Client Error 409 (Conflict) response. The request could not be completed due to a conflict with the current state of the resource. (IP only)
	SIP client error 411	The endpoint sent a SIP Client Error 411 (Length Required) response. The server refuses to accept the request without a defined Content Length. (IP only)
	SIP client error 413	The endpoint sent a SIP Client Error 413 (Request Entity Too Large) response. The server is refusing to process a request because the request entity is larger than the server is willing or able to process. (IP only)
	SIP client error 414	The endpoint sent a SIP Client Error 414 (Request-URI Too Long) response. The server is refusing to service the request because the Request-URI is longer than the server is willing to interpret. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
SIP Failure (cont.)	SIP client error 420	The endpoint sent a SIP Client Error 420 (Bad Extension) response. The server did not understand the protocol extension specified in a Require header field. (IP only)
	SIP client error 481	The endpoint sent a SIP Client Error 481 (Call/ Transaction Does Not Exist) response. (IP only)
	SIP client error 482	The endpoint sent a SIP Client Error 482 (Loop Detected) response. (IP only)
	SIP client error 483	The endpoint sent a SIP Client Error 483 (Too Many Hops) response. (IP only)
	SIP client error 484	The endpoint sent a SIP Client Error 484 (Address Incomplete) response. The server received a request with a To address or Request-URI that was incomplete. (IP only)
	SIP client error 485	The endpoint sent a SIP Client Error 485 (Ambiguous) response. The address provided in the request (Request-URI) was ambiguous. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
SIP Failure (cont.)	SIP client error 488	The endpoint sent a SIP Client Error 488 (Not Acceptable Here) response. (IP only)
	SIP forbidden	The SIP server rejected the request. The server understood the request, but is refusing to fulfill it. (IP only)
	SIP global failure 603	A SIP Global Failure 603 (Decline) response was returned. The participant's endpoint was successfully contacted, but the participant explicitly does not wish to or cannot participate. (IP only)
	SIP global failure 604	A SIP Global Failure 604 (Does Not Exist Anywhere) response was returned. The server has authoritative information that the user indicated in the Request-URI does not exist anywhere. (IP only)
	SIP global failure 606	A SIP Global Failure 606 (Not Acceptable) response was returned. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
SIP Failure (cont.)	SIP gone	The requested resource is no longer available at the Server and no forwarding address is known. (IP only)
	SIP moved permanently	The endpoint moved permanently. The user can no longer be found at the address in the Request-URI. (IP only)
	SIP moved temporarily	The remote endpoint moved temporarily. (IP only)
	SIP not found	The endpoint was not found. The server has definitive information that the user does not exist at the domain specified in the Request-URI. (IP only)
	SIP redirection 300	A SIP Redirection 300 (Multiple Choices) response was returned. (IP only)
	SIP redirection 305	A SIP Redirection 305 (Use Proxy) response was returned. The requested resource MUST be accessed through the proxy given by the Contact field. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
SIP Failure (cont.)	SIP redirection 380	A SIP Redirection 380 (Alternative Service) response was returned. The call was not successful, but alternative services are possible. (IP only)
	SIP remote cancelled call	The endpoint canceled the call (IP only).
	SIP remote closed call	The endpoint ended the call. (IP only)
	SIP remote stopped responding	The endpoint is not responding. (IP only)
	SIP remote unreachable	The endpoint could not be reached. (IP only)
	SIP request terminated	The endpoint terminated the request. The request was terminated by a BYE or CANCEL request. (IP only)
	SIP request timeout	The request was timed out. (IP only)
	SIP server error 500	The SIP server sent a SIP Server Error 500 (Server Internal Error) response. The server encountered an unexpected condition that prevented it from fulfilling the request. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
SIP Failure (cont.)	SIP server error 501	The SIP server sent a SIP Server Error 501 (Not Implemented) response. The server does not support the functionality required to fulfill the request. (IP only)
	SIP server error 502	The SIP server sent a SIP Server Error 502 (Bad Gateway) response. The server, while acting as a gateway or proxy, received an invalid response from the downstream server it accessed in attempting to fulfill the request. (IP only)
	SIP server error 503	The SIP server sent a SIP Server Error 503 (Service Unavailable) response. The server is temporarily unable to process the request due to a temporary overloading or maintenance of the server. (IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
SIP Failure (cont.)	SIP server error 504	The SIP server sent a SIP Server Error 504 (Server Time-out) response. The server did not receive a timely response from an external server it accessed in attempting to process the request. (IP only)
	SIP server error 505	The SIP server sent a SIP Server Error 505 (Version Not Supported) response. The server does not support, or refuses to support, the SIP protocol version that was used in the request. (IP only)
	SIP temporarily not available	The participant's endpoint was contacted successfully but the participant is currently unavailable (e.g., not logged in or logged in such a manner as to preclude communication with the participant). (IP only)
	SIP timer popped out	The endpoint did not respond in the given time frame. (IP only)
	SIP trans error TCP Invite	A SIP Invite was sent via TCP, but the endpoint was not found.(IP only)

Table A-1: Primary Disconnection Reasons (Continued)

Category	Cause Message	Description
SIP Failure (cont.)	SIP transport error	Unable to initiate connection with the endpoint. (IP only)
	SIP unauthorized	The request requires user authentication. (IP only)
	SIP unsupported media type	The server is refusing to service the request because the message body of the request is in a format not supported by the requested resource for the requested method.

Table A-2: Secondary Disconnection Causes

Category	Cause Message	Possible Solution
Incoming video channel does not match conference video settings	The incoming video parameters are incompatible with the Conference Video parameters	Match conference video settings with remote device video capabilities
	Parameters in the Software CP conferences are incompatible with the incoming video parameters	Match conference video settings with remote device video capabilities
Remote Device does not support the current video parameters	Remote device is not compatible with the conference video settings	Match conference video settings with remote device video capabilities
	Inadequate video card resources	Match conference video settings with remote device video capabilities
	When moved to a Transcoding or Continuous Presence conference, the participant's video capabilities are not supported by the video cards	Match conference video settings with remote device video capabilities
	Video connection could not be established	Match conference video settings with remote device video capabilities
	The remote device lacks VCPC or VCFX capabilities	Match conference video settings with remote device video capabilities

Table A-2: Secondary Disconnection Causes (Continued)

Category	Cause Message	Possible Solution
Remote Device does not support the current video parameters (cont.)	The participant video settings are not compatible with the Conference On Port video settings	Match conference video settings with remote device video capabilities
	The participant video settings are not compatible with the Conference protocol	Force the conference video settings to match remote device video capabilities
Remote device failed to change its video parameters	New conference H.264 settings are not compatible with remote device settings	Force the conference video settings to match remote device video capabilities
	New conference video settings are not compatible with remote device video settings	Force the conference video settings to match remote device video capabilities
	The endpoint cannot re-open the video channel after the conference video mode was changed	Force the conference video settings to match remote device video capabilities
	The outgoing video channel failed to reopen in a COP conference	Force the conference video settings to match remote device video capabilities
	Remote device shut its video channels	Disconnect and reconnect the remote device
Video stream violation during session	Video stream violation due to incompatible annexes	Disconnect and reconnect the remote device
	The incoming video rate is incompatible with the conference rate	Disconnect and reconnect the remote device

Table A-2: Secondary Disconnection Causes (Continued)

Category	Cause Message	Possible Solution
Video channel rejected by inadequate H.323 card resources	H.323 card failure	Reset the H.323 card
Conferencing Limitation	Video connection for SIP participant is temporarily unavailable	Set the video conference to CP or Video Switching with defined video parameters

B

Appendix B: Glossary

This appendix lists the terms and abbreviations that are related to the MGC functionalities and technologies, and are commonly used in the MGC Manager documentation.

Abbreviation/ Term	Explanation
AMI	Alternate Mark Inversion. A T1 line coding format, inverting alternate ones.
Asynchronous	A transmission method used by dial up modems. Data is transmitted using a start bit at the beginning of a character and a stop bit at the end. The time interval between characters may be of varying lengths.
ATM	Asynchronous Transfer Mode. High speed (up to 155 Mbps) high bandwidth network that integrates voice, video and data. ATM provides connectivity to LANs, WANs, private networks and sub-networks. ATM supports applications requiring high transmission speeds, large transmission capacities, and bandwidth on demand.
Audio Bridge	Used to mix multiple audio inputs and to output composite audio to each of the endpoints connected to a conference.
B8ZS	Bipolar 8-Zero Substitution. A T1 line coding format substituting each group of eight consecutive zeros with an established pattern. See also T1 line.

Abbreviation/ Term	Explanation
Bandwidth	Defines the information carrying capacity of a channel. In analog systems, it is the difference between the highest frequency that a channel can carry and the lowest, measured in hertz. In digital systems, bandwidth is measured in bits per second. The larger a connection's bandwidth, the more data can be transmitted in a given amount of time, allowing for greater video resolution and more sites in a conference. See Line Rate.
BAS	Bitrate Allocation Signal. BAS codes are used to exchange information about capabilities and commands between devices at opposite ends of a digital video connection.
B-Channel	Bearer Channel. A channel in a span or in a group of spans, that carries audio-visual data. The ISDN circuit-switched bearer channel is capable of transmitting 64 Kbps of digitized information.
Bonding	Bandwidth ON Demand INterpolarity Group. A transmission protocol that aggregates two 64 Kbps B channels to function as one 128 Kbps channel. When using several BRI channels, Bonding means that only one D-channel serves all BRI channels, while the remaining D-channels are used for data transfer. See also: BRI.
Bps, Kbps	Bits and kilobits per second; a unit of bandwidth, that is the amount of data that can flow during one second over a communications line (using a transmission medium). 1 Kbps=1000 Bps
BRI	Basic Rate Interface. A type of ISDN connection for transmitting data, consisting of 3 channels: two B-channels (each of 64 Kbps) and one D-channel (16 Kbps).
Carrier	A telephone or other company that provides telecommunication transmission services.
Cascading Conference	The use of two MCUs in a multipoint video conference, allowing for multipoint conferences with more than 12 video participants.

Abbreviation/ Term	Explanation
CAS	Channel Associated Signalling. An interface for Audio Only conference participants. See also T1-CAS.
CIF, 4CIF, QCIF	Common Intermediate Format, an optional part of the ITU-T's H.261 and H.263 standards. CIF specifies 288 non-interlaced luminance lines, that contain 176 pixels. CIF can be sent at frame rates of 7.5, 10, 15, or 30 per second. When operating with CIF, the amount of data to transmit cannot exceed 256 K bits (where K equals 1024).The CIF video format has the capacity to transmit video images of 352x288 pixels at 36.45 Mbps and 30 frames per second. A 4CIF format has four times the capacity of CIF; QCIF has quarter the capacity of CIF.
Circuit	Another term for span; a T1 or E1 line.
Codec	Coder-decoder. A device that converts voice and video into digital code, and vice versa. Refers to the endpoint video camera and video board that are used for videoconferencing.
Conference	Connection between two or more endpoints exchanging video and audio information. If only two endpoints are involved, a conference is called *point-to-point* and no MCU is required. If more than two endpoints are involved, it is called a *multipoint* conference, and an MCU (Multipoint Control Unit) is required as the management system. See also MCU.
CSU	Channel Service Unit. Customer-provided equipment that is used as an interface between a communication network and the data terminal.
D-Channel	The channel in a span or in a group of spans, which is used to transmit signaling information between the (public or private) switch and the MGC-100.

Abbreviation/ Term	Explanation
DTMF	Dual Tone Multi Frequency. A system of coded signals used by touch-tone telephones in which a specific sound, frequency or tone is assigned to each key so that the signal can be easily recognized by a computer. The codes enable data input and control of voice-processing systems. DTMF signals can pass through the entire connection to the destination device and therefore are used for remote control after the connection with the MCU is established.
E1 line	A 2 Mb digital switched line used in Europe.
Endpoint	An endpoint is any videoconferencing unit.
FECC	Far End Camera Control. In certain video cameras, the accompanying software that enables a participant to control a remote camera. Used in Continuous Presence video conferences in conjunction with the LSD option. See also LSD.
Frame	A group of bits that make up an elementary block of video data for transmission by certain protocols.
Frame Rate	The number of video frames displayed on-screen during one second, measured in fps (frames per second).
G.711	ITU-T audio algorithm, 64Kbps, 3.4 kHz.
G.722	ITU-T audio algorithm, 64Kbps, 7 kHz.
G.728	ITU-T audio algorithm, 16Kbps, 3.4 kHz.
Gatekeeper	A type of server that performs two main functions: translates LAN alias addresses of terminals and gateways to IP addresses and provides bandwidth management.
H.221	ITU-T standard that defines how to multiplex video, audio, control, and user data into one serial bit stream.
H.230	ITU-T standard that defines simple multipoint control systems procedures and describes network maintenance functions.

Abbreviation/ Term	Explanation
H.231	ITU-T standard that defines a set of MCU functions and operational requirements.
H.242	ITU-T standard that defines initiation of communications between systems and capabilities negotiation procedures.
H.243	ITU-T standard that defines initiation of communications between systems and capabilities negotiation procedures in multipoint conferences.
H.261	ITU-T standard that defines the Px64 video coding algorithm.
H.263	ITU-T standard that provides improved compression and quality of video images at a line rate lower than 384 Kbps. This standard is not supported by all codecs.
*H.264**	A proprietary Polycom Video compression standard.
H.264	ITU-T standard that provides improved compression and quality of video images in lower line rate connections and is part of the Highest Common mechanism in Video Switching conferences.
H.320	ITU-T standard that defines how the H-series video conferencing recommendations work together.
H.323	ITU-T standard for audio, video and data communications across IP-based (LAN) networks, including the Internet.
IMUX or Inverse Multiplexing	A feature that allows high speed serial data streams to be divided into multiples of 56 or 64 Kbps for transmission over public digital switched networks (PSTN). At the remote end, all the channels are phase-aligned and synchronized to recreate the original data stream.
IP	Internet Protocol. The working protocol that forms the basis of the internet.
ISDN	Integrated Services Digital Network. A set of protocol and interface standards (voice, video and data) that comprise a telephone network. There are two types of ISDN lines: BRI and PRI.

Abbreviation/ Term	Explanation
ITU-T Standard	International Telecommunications Union, Telecommunication Standardization Sector (formerly CCITT). An international group that produces official standards for telecommunications.
LAN	Local Area Network. A group of computers and other devices linked via a network's operating system.
Line Rate	The amount of bandwidth used by a communication device, measured in Kbps (kilobits per second).
Leased Line	A dedicated PRI line supplied by the telephone company. See also PRI line.
LSD	Low Speed Data. A data channel that allows the participant to transfer commands from one endpoint to the camera of another endpoint and control its camera from far. See also FECC.
LDAP	Lightweight Directory Access Protocol.
MCU	Multipoint Control Unit. Device which allows more than two sites to be connected in a video conference.
MPI	Multi Protocol Interface that supports connection to endpoints using communication protocols such as V.35 RS-449 and RS-530 over a serial connection.

Network Service	A collection of spans from a fixed service provider. Network services can be any of the following types:
	• Private Network
	• Public Utility, including:
	  • Long distance service
	  • Local service
	  • PTT
	  • PBX; local switchboard leased line

Null modem cable	A serial cable designed to eliminate the need for communication equipment when two digital devices are directly connected to each other.

Abbreviation/ Term	Explanation
Port	One of 23 channels in a T1 PRI; one of 24 channels in a T1 leased line; or one of 30 channels in an E1 PRI.
POTS	Plain Old Telephone System. Conventional analog telephone line.
PRI	Priority Rate Interface. An ISDN interface designed for high volume data communication. Consists of 23 B channels of 64 Kbps each and one D channel of 64 Kbps. In Europe, the PRI line provides 30 B channels + one D channel.
QCIF	Quarter CIF. A video format with image size of 176x144 pixels that transmits 9.115 Mbps at 30 frames per second (a quarter of the capacity of CIF). See also CIF.
QoS	Quality of Service. QoS defines the performance of a network service, such as the average delay between packets.
RS-232	A standard for serial interface connection.
SIP	Session Initiation Protocol. An application-layer protocol designed to work over IP networks. A SIP service defines the properties and the IP addresses of the SIP network components.
Span	An ISDN line or leased line. A span may be of either T1 (United States) or E1 (Europe) type. Also called a circuit.
Switched 56 line	A line using protocols pre-dating the ISDN protocols; also called a robbed bit signaling line or a pre-ISDN line.
T.120	A standard for data and application sharing. Users can share and manipulate data as if they were in the same room.
T1 Line	An 1.5 Mb digital switched line used in the United States.
ToS	Type of Service. Tos defines optimization tagging for routing audio and video packets.
WAN	Wide Area Network. A communications network that services a geographical area larger than the LAN.

Abbreviation/ Term	Explanation
Whiteboard	An on-screen shared notebook for placement of shared documents.